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as in Lewis originals*

1956

Diary

L. J. Brass 1st section.

Samarai

Wed. March 21: Rain from about 3 A.M. to noon, and thick weather after that. A Catalina was prevented from calling on a flight from Rabaul (with U.N. delegates) to take on at Moresby a woman (Mrs. Bruce Hamilton) dangerously ill with a gangrenous leg.

Engaged as transport man at L70 a month Lionel Evannett, Papuan born and reputed to be a good bushman and linguist. We knew him as the master of a small ship in 1953. He starts April 1st.

Most of day spent in paper work - going over maps and notes with Lionel, letter writing, etc.

Met at guest house Bruce Hamilton, born on Woodlark Island, author of "Folk Tales of the Muzzie Wuzzies," and now manager of the Gili Gili plantation. Rather drunk, and not well thought of in town, because of neglect of family. He gave me an autographed copy of his book.

Thursday, Mar. 22: Another wet morning, more letter writing. Formal application for release of one cargo from bond. Kelly, Customs man, is in measles quarantine, and Paul, schoolmaster, is acting Collector. A radio about the cargo went to Moresby yesterday. Talked by radiophone with Bennie Ryan of B.P. in Moresby and had confirmation of an arrangement for Carr Air to meet Rus Petersen's plane on April 6 if Rus arrives in Moresby then.

To dinner with the W. Cothrell-Dormers (Dept. of Agriculture). Pleasant evening at their house on south shore of island. Dormer was formerly director of the department of P. N. G.. Has had experience in Malaya and Tonga. Has two assistants in Samarai. Doing much planting of pilot plots of coffee - mainly arabica, some robusta. Runs extension courses for select natives from as far distant as the Sepik. Also concentrating on the growing of dry rice as a native food crop. Mrs. Dormer is a sister of Mick Healy.

Dormer spoke of Woodlark Island as having a rich and in some ways peculiar flora, with similarities to country about SALMMO, or Fergusson Isl.

Friday, Mar. 23: Still somewhat rainy in A.M., breeze continues SW; heavy dark cloud over mainland mountains.

Cargo released and moved into Bunting's bulk store, in same position as 1953. I have 14 of the 17 crates unpacked. Buntings have loaned me two good boys.

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Talked with Cottrell-Dormer's office and he loaned me copies of his reports on Woodlark Id., etc. D.C. Clifton-Barrett loaned me Terrain Study 34 on the Louisiade Archipelago.

Samarai weather is sultry, but temperatures (82" max. today) are not too oppressive except in Bunting's bulk store, when I sweated copiously today.

A new arrival at guest house today was a young, rather brash man from Chicago who for some months has been European Medical Assistant at Baniara. Probably no great ornament to the service. Loud in talk about drink and women as his particular requirements. Name: Stan Tech.

Sat. Mar. 24: No rain today. Spent the morning completing the unpacking of the cargo and partly emptying the boxes for reorganization of supplies. Have the empty crates piled against the wall for use as storage shelves.

Much of the afternoon spent in only partly successful attempts to fix my new portable







Smith-Corona. Though carefully packed by me in New York, the plastic was badly out of shape when taken from the box in which it was shipped. The fancy frame of the machine, made of very thin metal, was pressed in in front so that the space bar could not move up and down. Most trouble was caused by the ribbon rewind mechanism, which still works only one way.

To Dusty Miller's for dinner. There one of his boat captains (Ian) reported his arrival with our recruits from Goodenough and Fergusson. It appears that he has a couple of boys we had last time who were not satisfactory, and whom we did not want to employ again.

During the morning Norman Izod arrived from Normanby Island and went into hospital for observation and X-ray examinations. Has closed down his sawmill preparatory to going to Australia for a holiday of several months. He has a white caretaker in charge. Offers us the use of a roomy native built house on the beach for use as a base, or if that is not well situated for us, the use of a partly built house at the sawmill, some three quarters of a mile inland, on the edge of good tall forest. Izod reports big bat caves at Bunama, on SE Normanby. Bert Crozier, an old times, who has prospected on the island and now lives near Izod, might be a useful source of information for us. The Rev. Ralph Grant, i.e. Methodist Mission at East Cape also has a lot of local knowledge, but Izod does not vouch for his veracity.

Miller has a missing black and white film of a dance we saw at Opaigwari in 1953. He developed the film and made prints for Wynn, who actually made the photos with my Leica camera.

Sunday, March 25: North breeze; no rain but considerable cloudiness.

Day spent abstracting Terrain Studies of Woodlark and the Louisiades ~~for information~~ and a report of Cottrell-Dormer on Woodlark. Wrote to Rutledge, A.D.C. Esa'ala for information on Fergusson Island. Also wrote Adamach and Willis.

On a walk down to the waterfront and swimming baths with Dusty and Ailsa in late afternoon, saw the big overseas vessel "Maybank" tied up to load coira, and met Dr. Nespor, Medical officer of Samarai. Nespor a Lithuanian person. Was stationed at Baniara several years ago and while there went into the Tapitapipi bat caves with Cruttwell, and I think also to the Top of Mt. Simpson with Cruttwell and a control officer.

Monday, March 26: Northerly again; fine day; not much cloud; hot on the flat out of the wind.

Inspected our 8 recruits, after which Buntinh documented them, they had medical examination, and were outfitted. There are only two of the boys we had last time, Kim the cook and Isulele, a mammal boy. Isulele is not a boy I asked to have back, but as his previous not 100% satisfactory service may not have been due to the influence of older countrymen of the Norima coast who were in our party, I took him on. The Cook is signed on at 6 pounds a month, the others at 25 shillings. Three are from Goodenough Island, 3 from Kalo Kalo on Fergusson; and 2 from Morima on Fergusson. Several are of good physique for islanders, all look intelligent and alert, one Kalo Kalo has eyes that I don't quite like and therefore he will have to be one of my boys. One Goodenough is badly infected with the ringworm known sipoma, but this should soon clean up under treatment.

Talked with old Tom Craig, a wily old timer resident in Samarai for some years and reputed to have made, and kept, several fortunes as a trader in different places, the last being a business established in recent years in Port Moresby and sold lately for 80,000 pounds (ca. \$160,000). Craig was on Sudest Island for 13 04 14 years. He knew places by name but, perhaps through failing sight, was not very good at finding them on the map. Recommended landing at Rambuso on the northeast coast for good forest (Father Eard did the same); from there the island can be crossed in a day to Pawa, where Williams lives and there is good forest. Bowla on central north coast recommended as landing place for Mt. Rattlesnake, as there is considerable population and a village policeman there; from base at Bowla strike inland either from the 16-mile or Joe landing, to west of the village. Could also go to Mt. Rattlesnake from Hinni Bay on south coast, where there is population and according to the map (Sheet 8 of Hydrographic Office chart for Papua-Louiside Archipelago) a spacious valley. Craig lives in Hinae Bay. He says a boat could be chartered from the Catholic Mission on Nimoa Island; Mission has small <sup>acacia</sup> coconut plantation on north coast.







Craig says there are no wallabies on Sudest; "ringtail possums" are there, also rats; natives do not hunt in the mountains.

Visited Izod in hospital. He described what appeared to be Dactylopsila for Normanby Island. Izod came to Papua from England in 1911; an engineer or skipper of a small vessel, he was on the Vailala River when oil was first found by a hand drill about 1916.

According to Craig the "gum" exported from Sudest and Rossel is from a species of kauri pine (Agathis). Womersley says it is from Vatica papuana, a dipterocarp. Craig states that he sent a sample of the gum tree timber to Sydney, and it was reported on unfavorably as a commercial timber (a soft, yellowish wood).

Tuesday, March 27; Strong, northerly breeze at times; hot; little cloud.

Morning spent in reorganization of collecting supplies, and waterproofing pack clothes. In afternoon went with Dusty and Ailsa to Burroughs slip on Sariba Island on Bunting's "Ksdeluma" (Rogea for old woman). The "Crystal Star" (65 footer) being rebuilt for Bunying at this slipway. Dusty pointed out a spot on the mainland, across China Strait from Sariba, where the Eichhorn Brothers lived and where there is a small coconut plantation. One of the brothers said to be buried there.

Wed. March 28: Not so much norther today; and very hot out of the shade and the breeze.

Lost much sweat at work in Bunting's godown. Have gone about as far as I can in reorganizing gear. Now there is floor space, I can order foodstuffs and get them placed in spare ~~boxes~~ field boxes which we will return full of specimens.

Being unable to open the back of my new Zenith portable radio set, for insertion of the battery, I took it around to the radio technician, , who opened the thing at once and gave advice on running it. A map on the wall in the shop was stuck with 35 or 38 telerradio stations in the Samarai area, four or five pink pins indicating stations presently out of order or unattended. People who have only receiving sets, such as ourselves, have important messages broadcast to them at 8:05 and 11:15 A.M. This service is free. There is no licensing fee for a receiving set.

Thursday, March 29: Another hot day; breeze holds from ca. north; slight showers in afternoon.

With W. Cottrell-Dormer, his wife, a Miss Kemp who is a visiting Girl Guide Commissioner, Liddle (Native Authority expert visiting from Rabaul) Peter Seekey, A.D.C. Samarai, and Assistant Agriculturist John Wallace on the Govt. launch to Kuriaro Agriculturist and extension school on the mainland opposite Samarai. Established within the last two years, the station has buildings which used to belong to Burrough the ship-master who is now on Sariba Island. Student body varies from about 45 to 60, mostly from eastern Papua and islands, but some from as far as the Sepik River. Emphasis is on Rice culture and the establishment of pilot plots of robusta and arabica coffee. A little Coffee liberica also being planted. Coffee seeds germinated on top of ground, under a grass mulch, then transplanted to individual baskets which are placed on benches under shade houses. Pepper also being established at Kuriaro; some tea is planted; peanuts also being emphasized as a food crop. Students taught the laying out of coffee plantings (10 foot spacings, on the triangle system), and contour planting with the aid of what is called an A frame and plumb-bob. Each student makes his own rice-hulling mortar of yellowish-red Pterocarpus indicus wood) and winnowing basket of split rattan. Much attention given to leguminous cover crops and shade plants (Lucaum, Crotalaria , pigeon pea, etc.) for coffee.

After a demonstration of rice hulling and winnowing, and inspections of the plantings, we went across to Kwato Mission to drop the non-agricultural members of the party, then landed on Rogea Island, opposite Kwato across a narrow strait. A native cooperative store there, a government school for natives; also a newly established coffee nursery. Thence about half hour or more walk east behind the coast to a pilot plot of robusta coffee, owned







by a native and his wife. Coffee doing very well. Drank cocoanut milk, and continued walk to meet boat about another  $3/4$  hour to the east. Hot day but walk would have been pleasant if not so hurried. Gave Dormer names for many common plants of the rain forest second growths and mangroves edges. Had lunch back with the Dormers back in Samarai.

A radiogram from John Womersley advising that he expects to arrive in Samarai by Catalina of April 17, then join us on Normanby.

Dusty, with Ailsa and her father, left for Goodenough and Fergusson, and I moved into his comfortable house.

Good Friday, March 30: Boisterous northerly breeze one of those hot, still, "Samarai" nights.

Talked with Malcolm Smith, European Medical Assistant of Mapamoism on Fergusson Island. Within the last year or so Smith made a patrol along the coast of Seymour Bay to Kalo Kalo, then round Cape Labillardiere to Didiau on the NW coast, on the to Roselawn in Hughes Bay, south to Salaladi in the interior Valley, then out to Salamo on the SW coast. From Didiau Smith went in to the mountain villages of Mailolo to buy English potatoes; walk of about  $2\frac{1}{2}$  hours by a very steep track; returned by some Didiau (the 1-mile map has the lowest of two Mailolo villages on about the 2700-2800 -ft. form line); vegetation of the Mailolo valley described as largely low and scrubby; Smith has no botanical knowledge and little understanding of vegetation. The Govt. track from Boselewa to Salaladi (or Salakahadi) described as following the valley of a large stream which cuts through two lines of mountains or hills; much heavy forest; 2-3 hours travel, which seems fast for a map distance of 7-8 miles, and a man of Smith's rather stout figure. Quoting hearsay, Smith described the Govt. track from Salakadi to Fagalulu on Seymour Bay as a narrow, rough mountain trail which takes about a day to travel. He sends boys from Mapamoism to Mailolo to buy potatoes, but instead of taking a track which the 1-mile map shows to go up to those villages from Seymour Bay, the boys travel the long way round Cape Labillardiere and climb the mountain from Diardiau. I did not find out Smith's walking time salakadi to Salamo. He reports more tall primary forest to the Salakadi area than anywhere else, and the swampy lake Lavu or Rabua is not far away. Sulphur fumes said to be a nuisance on the coast of Seymour Bay.

The above information throws some doubt on the feasibility of an approach to the mountains (Mt. Kaihole) of the Mailolo area from Seymour Bay, and Seymour Bay itself would seem not very attractive for a lowland base camp. It might be worth considering as a mountain objective what MacGregor referred to as Mt. Edagwaba, between the Salakadi valley and the south or Morima Coast. The Milne sheet of the Australian Aeronautical Map shows the Edagwaba high point as 5977 feet, Kaihole as 5615 ft, and the Kilkarren high point at 6800 ft. Though somewhat long (at say a morning's travel) the approach to Salakadi from Hughes Bay would be easy and through reportedly good forest; against this is the exposed nature of most of the Hughes Bay coast in the southeast season. The 1-mile map shows a track going over the mountains from the morima coast to Salakadi and attaining an elevation of 4500 ft.

Twenty-one visitors, mostly from Port Moresby, arrived late in the afternoon for the Easter holidays. The charter flights of Carr's Air brought them to Milne Bay, whence they were brought by launch to Samarai—tired and without food all day. Russ Webster from Lae arrived from Lae, where he is now stationed.

~~21st March 1953~~

Sat. March 31: Hardly any breeze and very hot indeed. An All-day cricket match was called off (partly, perhaps, because of an all-night party which left some of the players in poor condition). Heavy rain for about  $\frac{1}{2}$  hour after 9 pm. cooled the air to a pleasant temperature.

Wrote letters all day.

Carr's Air, owned by Bob Carswell, appears to be an enterprising concern and succeeding







in taking quite a bit of business away from Qantas. It flies supplies of fresh vegetables and English potatoes to Port Moresby from the Central Highlands, using two or three Auster planes (about 10 seaters). A service, carrying passengers, mails, etc. connects Port Moresby with Baibara (south coast), Milne Bay (for Samarai), Vivigani (on Goodenough Island), and Losuia (Trobriands) every Friday, and sometimes there are special flights on this route. Cannot discover a reason for a stop at Vivigani, although someone thought it was to pick up and return native labor.

Sunday, April 1: Cooler today, more good rain in early hours of night.

More letter writing, and some reading. Pace of the holiday merrymaking seems to have slackened, though some of the younger men drunk all day on beer. Bob Greeney, who was Patrol Officer acting as District Officer at Esa'ala in 1953, is in town, and from him I hope to get the information on Fergusson Island after the holidays. He claims to know something about the mountains.

Monday, April 2: Weather as yesterday, but more sultry.

"Congratulations, you now own the world's finest typewriter," is the opening baloney of the instruction booklet that came with my new Silent-Super Smith-Corona portable typewriter. I have already noted the condition in which it was unpacked. Today, in the middle of a letter, there was a whir and a bang and the thing was properly on the blink. The piece of cat-gut (or substitute) which winds on a spring wheel to work the carriage back and forth snapped in two. Fortunately Miller has a portable.

The Post Office opened for an hour and I went around to claim a package from the U.S. which was being held in Customs bond. Barbara had sent some kodachrome slides I made on my summer vacation, and an easter egg basket. Not knowing the contents I had to open the package for inspection. Gravely, after opening the big egg and extracting a little porcelain rabbit, the postmaster entered the importation as "fauna".

Tuesday, April 3: Wet and squally all day from the NE. The Carr's air planes taking Easter visitors back to Port Moresby could not take off from Milne Bay until about midday (the passengers left Samarai by launch at 11 last night). Qantas Catalina did not arrive from Moresby; said to be engine trouble.

Placed with Buntings orders for stores for two months and various items of hardware which we buy locally, such as big knives and halfaxes. Evennett collecting five gallon kerosene drums ~~for packing rice, sugar, etc.~~ and boiling them clean for packing rice, rice, etc., for the mountains.

A surprised addition to our party today. Lik-lik, a mammal boy of 1953, having heard I was in Samarai, turned up from East Cape, looking for a job. I took him on although this makes one more boy than I had budgeted for and I think we really need. It will allow us to pay off any one of the nine who may not prove too good. Lik-lik had been working on a plantation for a half-caste. He is a bit low in condition, and half his body is covered with a form of tinea which seems different from the usual "sipoma".

Wed. April 4: Overcast and some drizzle. Wind changed from NE to SW, then to West.

Day spent in odd jobs, hunting around for items which are in short supply or unobtainable in town (stocks are still low after the recent waterfront strike in Australia) and kicking my heels for fully an hour in the DC's office. After long waiting, and seeing three officers, I found that no copy of the Native Labour Ordinance, which every employer is supposed to have, was available.

However, at the DC's office I had a good talk with Patrol Officer R. K. Greeney, who was ~~at Esa'ala~~ at ESA'ALA in 1953 and helped us on Goodenough Id. Greeney has done a fair amount of patrolling on Fergusson, but not in the mountains proper. He does not



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know much about the mountains, but thinks the natives hunt on them. Gave me travel times from several patrol reports, including one by P.O. Mike Tolhurst from Didiau to Mailolo and Iamalele II in 1950 (travel time from coast to coast was 13 hrs.). As in the case of most modern patrol reports, Tolhurst's gave no useful information on the country. Patrol officers these days seem mainly concerned with getting from village to village and taking census which is supposed to be annual, but is not in most districts. Green thinks a good place for a lowland base can probably be found in Seymour Bay. He has not found sulphur fumes a nuisance there.

Dusty and Ailsa returned from the D'Entrecasteaux. Cataline arrived from Port Moresby, bringing Dr. Dorothy Shaw on an inspection ~~tour~~ and orientation visit.

Thursday, April 5: Weather much as yesterday's unsettled type, but only one or two showers of rain. Coolest day since I have been here.

Denis Williams radiogrammed from Brisbane that Rus Peterson will arrive tomorrow by Carr's Air. At last I was able to get delivery of most of the stores ordered Tuesday, and have most sundries packed in our field boxes; Bunting's grocery department (Harold Hill i/c) not as efficient or obliging as in 1953.







Friday April 6: Changeable weather continues. Got as far as I could with the packing of food supplies. Identified a number of disease-carrying plants collected yesterday in Milne Bay by Dr. Shaw. Mails to the U.S. by Catalina, another day late through more engine trouble.

Rus arrived about 10:30 in the evening on the launch Kitava from Milne Bay. His progress apparently rather hectic after leaving Carr's Air in the Bay. Launch stopped at two or more places to drop passengers. Finally we met Rus in charge of Lionel, standing under the Robinson monument, three of our boys with his bags on their shoulders, and a bandsman from a visiting Australian army military vessel skirling away on the bagpipes..The army vessel has two platoons of native troops on board. Smart men. We watched them march this afternoon to kettledrums and pipes.

Sat. April 7: The first day of the southeast season. Remarkable change in the weather from disturbed and changeable to clear and steady. A sparkling quality to the early morning views of the mainland. Haze will soon come.

Introduced Rus to government, etc. and in afternoon he began to organize his gear and supplies.

Sunday April 8: Light and variable breeze. Very hot in the godown where Rus and I worked most of the day on his supplies and other final doings with cargo. The Kedeluma, on which we go to Normanby, returned this afternoon from a trip to Fife Bay.

To the Cottrell-Dormer's in evening to see Kodachromes made by Ag officer Ken Cole. Poor lot, from  $\frac{1}{2}$  to 2 stops underexposed. Most of them supposed to show rice-growing activities in the Tapio area of Collingwood Bay. Mostly dry paddy, but some wet. Dormer later showed a few shots of Mekeo dance, and some holiday procession in Port Moresby; overexposed.

Monday April 9: Fitful southeaster; hot day without rain, but nice weather. The last several nights have been cool - one needed a sheet.

Loaded cargo on the Kedeluma after lunch and about 10:30 PM drew away from the Samarai wharf. Tied up at the native cooperative wharf at Sidudu on Suriba Island. Left there at 4:50 am.

Tuesday April 10: Arrived at Waikaiuna, close below Sewa Bay on the west coast of Normanby Island about 9:30 am. Izod's place. Landed at the ~~buildings~~ coconut plantation. Drab looking place with largely black-painted or tarred buildings, partly European and partly native in construction. No sign of life until Lionel and I got close to shore in the first dinghy. Then two undersized dogs and down the stairs of what proved to a trade store came an elderly, heavy, hard-faced sluttish woman with yellowed gray hair who, no doubt because of her heavy, particularly unfragrant character, is known far and wide as "Frangipanni Annie", Mrs. Izod. Izod is an altogether different sort of person, Thoroughly nice.

We were invited to take up quarters in a thatched-roofed dwelling on the beach. Locality unattractive; roof obviously leaky. Asked to see a half finished house at the sawmill, half a mile inland and ca. 50 feet above sealevel, which Izod had told me about in Samarai. A perfect spot for a camp. Small clearing in fine tall rain forest. Izod immediately set three boys to work to nail down the floor. We have ample space in the sawmill building for work quarters. A fly rigged for our boys. Place selected for a small house for them; ground very stony everywhere here on the rise of the hills.

Rus and Lionel, shooting at dusk, got a Pipistrellus, apparently three Miniopterus (bent-winged bat), and a small Pteropus. A good start in mammals.







Wed. April 11: Rain through much of the night; over 5-inches by Izod's gauge at the sawmill.

Took one boy (GALEWINA of Kalokalo) and botanized near camp in the morning after come essential camp chores. Followed Izod's tram line (wooden rails) to the coast in Waikaiuna Bay, where a timber-loading wharf is to be built. Fine tall forest only partly logged over. Could not recognize many of the big trees; but some were Vatica papuana, others looked like other dipterocarps, and Pterocarpus indicus grew to big size on the low banks of a creek. Big old Calophyllum inophyllum on beach of the bay; a creeping Cyclophorus plentiful on its branches. Izod states that the millable logs in his forest are predominantly dipterocarpus (Anisoptera, Hopea, spp., and Vatica). My plant gatherings mostly small trees of the rain forest edges, including a Mallotus, 2 Ficus, Maniltoa.

Another 4 or 5 Miniopteris and 2 more of the small Pteropus shot at dusk. One small snake taken; a few butterflies and dragonflies.

Tuesday April 12: No rain last night; quite cool towards morning, when one blanket was hardly enough for comfort. Day sultry but not oppressive.

Botanized north a short distance by old log-hauling trails. Nice lot of small and medium sized trees, a common Leptaspis of the forest floor, a beautiful little filmy fern on the base of a tree (a big Nephrolepis ~~herb of edge of path, star-shaped~~ and another fern common as ground plants), showy yellow-flowered acanthaceous herb of edge of path, etc. Had a second boy today (TAUGOVA of Morima). Neither shows any great promise yet. Both rather young to have confidence in presence of elders.

Rainfall records from Izod:

1955. June (13 to 30 only)	8.11 inches
July	57.15
August	23.06
September	41.16
October	8.18
November	7.26
December	5.49
	<hr/> 130.39

1956.

January	8.19	
February	10.36	
March	15.54	(Recording by an official gauge)

A young brown cuscus from the hills a little south of us bought this evening for 5/-; white inside the ears. A pineapple and about 7-8 lbs sweet potatoes bought for 2/-; a big pumpkin yesterday for 2/-.

Work of camp establishment nearly finished. The one big job has been the digging of a latrine pit in the very stony ground.

Friday April 13: And a wet day. Intermittent heavy showers began about 5 am; not much let up, and some thunder, after lunch. Had to light a lamp to work by at 5 o'clock.

Botanized part of the morning north along the government track towards Sewa Bay. Did not go more than  $\frac{1}{2}$  mile from camp. Fine tall forest with the usual abundance of big clean-boled brown-barked of what I take to be dipterocarps. Two palms found with nearly ripe fruits; one a slender pinnate species with red panicles, reminiscent of a much bigger sp. which occurred at out top camp on Goodenough Island in 1953; the other the smallest of two or three spp. of Calamus



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seen here so far. My Morima boy shaping well, the Kalokalo doubtful

Everywhere close to the sawmill the ground is very stony and apparently unattractive on that account for gardens., as no sign of native cultivation has been seen. Forest consists of a well spaced stand of the supercanopy trees, an abundant second layer of trees 25-30 m tall and about 20-30 cm in diameter, a substage up to 20-30 m high, and an ill-defined lower layer of small trees and saplings. A big leaved Amaracarpus (?) is perhaps the most common undergrowth small tree (4-6 m) in this stony forest. Usually there is a fairly abundant herbaceous undergrowth of few species (ferns, Marantaceae, Mapania, an erect prickly saggitate aroid, etc.) which thickens in the shallow hollows. The ground slopes evenly towards the sea.

Sat. April 14: Rain yesterday and last night registered 118 points. Enough rain this morning to spoil my collecting. Built a palmleaf house for shelter, then beat it back to camp. Only a few scuds of rain in afternoon and we have most of our laundry dry.

Botanized about a mile in the direction of Sewa Bay. Still fine tall forest. Most interesting plants were 3 spp. of spicate ground orchids, two of them looking like Malaxis. A sprinkling of big trees in flower and attracting birds, but am reluctant to cut anything that looks like a mill log. Spared a 30 m Hibiscus (red flowers) and a big Garcinia which were dropping flowers on the government road. A Mucuna with very big pale green flowers also in flower.

Last night, after two blank nights near camp in the primary forest, the boys set traps in Izod's coconut plantation on the coast. Results: 2 very spiny, chunky big, short-tailed brown Rattus, and five small gray Rattus which might be R. ruber. Nothing got by jacking; too much rain.

Listened in on the radio for the first time last night. Good reception from Australia at 9 PM. Same old Palestinian and North African troubles as weeks ago.

Rus and Lionel, hunting together, got nothing by jacklighting tonight. A Petaurus, Nyctimene, and a fairsized fruiteating bat which should be Rousettus or a small Dobsonia, shot by Lionel's boy Tinker.

Sunday April 15: Hot day, only slight showers, clouds drifting from a northerly direction.

Botanized a short distance up the Creek, not shown on the 1-mile map, which runs to the south of camp and into Waikaiuna Bay. Best day so far, but forest not abounding in species and very little in flower or fruit. Two fairsized trees were a Cerbera, common here, and a Syzygium with very small white flowers and small leaves. My first epiphytic orchid for the trip; a true "botanical" with purple flowers. Several ferns from moist banks of the creek, and a pretty small pinnate clump palm. Creek gravelly.

Two of the small rats in traps last night. A cuscus, pale purplish in general coloration, shot in a tree this morning by Tinker. Apparently different from the young animal bought from a native a couple of days ago.

Lionel to Bwasiaia village, 3-4 miles down the coast, this afternoon to arrange for carriers and guides to take him on a reconnaissance of the mountains. Returned in rain about 7:30 bringing two Nyctimenes and two Petaurus he had shot in flowering Calophyllum inophyllum trees along the coast.







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Monday April 16: Occasional showers towards daylight, and some heavy ones between 11 o'clock and noon.

Spoke by Izod's radiophone with Ken Lee of Buntinhs to order a few minor items of which we find ourselves short. Izod has a schedule with Samarai every 9.15 am. The service a boon to residents of the outposts. The sets work on wet cells.

Bota nized down the coast a bit past Kikisu Point, about  $1\frac{1}{2}$  miles from camp. Small rather steep beaches of gray gravel; a change to red volcanic rock at the point. Usual littoral forest fringe of great Calophyllum trees, occasional Barringtonias, and smaller beach trees such as Guettarda speciosa Scaevola koenigii and Tournefortia.

Six carriers from Bwasisia, escorted or accompanied by two village policemen, a councillor, and what appeared to be a mission teacher (he was wearing cross and chain) arrived in camp shortly before noon and Lionel left with them (4 carriers) for Bwasisia and the mountains after lunch. An old man named Ginger, formerly employed by Lionel's father and now a village policeman at Sewa Bay, came along to say that if the trail from Bwasisia to the high places was found to be too rough and steep he would show us a good one leading south from Sewa Bay. Plenty of men for carriers in Sewa Bay, he said. Not much labor available in Bwasisia area.

On my way back to camp before lunch called on an old gold prospector named Bert Crozier, who lives in a very neat and well built shack on the beach of Waikaiuna Bay. Evidently a very old man. Very neat and clean. Well spoken. Has lived on the island for 25 years. If he has a native woman I saw no signs of her presence. Showed me about 1-2 oz. of good coarse gold from the east side of the island. Said to contain about 10% of dross. No reef has been found on the island. Crozier says the best approach to the mountains in which we are interested is from the Sawataitai side. I can't see any indication of this on the map.

Tuesday April 17: A little rain last night, thundery and threatening after dawn; more showers after about 4 o'clock. Weather here indicates good conditions for Lionel's mountain climb today. But every cloud, day and night, has a shower in it.

Made a circuit down to Waikaiuna Bay, and back through Izod's coconut plantation. Collected 13 species but nothing of special interest. Fine tall forest lush with palms and herbaceous growths, on low ground close behind the coast. Having no watch I was back in camp by 10 o'clock, thinking it was much later. Both my waterproof watches have taken in rain on this trip, the first on Mt. Marirata back in March, the second in Samarai. Both sent to townsville by air for attention. The first came back the day we left Samarai for this camp, and after a week's wear the glass fell out of it.

Four of the small gray rats in traps set by the boys last night. Rus, jacking, shot another Nyctimene. Yesterday afternoon I sent the spare, sipoma-infected boy (Kwailakwaila of Kalokalo) out with an axe to look for trees containing Pogonomys. This morning he resumed the search and brought in three specimens, very wet and with tails half skinned through being yanked from the tree hollows. Late in the day one of Izod's boys brought in three more specimens in perfect condition. He asked for and received 4 sticks of trade tobacco in payment. We now have 12 mammal spp. for the camp, which is pretty good for a week.

Wed. April 18: Hardly any sun and many showers today. Too wet for much field work in the morning.

John Wormsley (Forest Botanist) and Ted Grey (Regional Forest Officer) arrived on the govt. vessel Huon at noon. They plan to spend a week with us. John brought







his native assistant with him, Michael, a Wedau boy.

About 5:45 pm Lionel returned from the mountain behind Bwasisia. Got up to 2300 ft., he reports, in very rough rocky country. This took seven hours. Could not find better country or a camp site. Heavily mossed conditions above about 2000 feet. Dacrydium elatum abundant, and reaching a diameter of about 15 inches above about 1500 feet (he brought down leaf specimens). Next try for a route into the mountains will be by the route of the Sewa Bay V.C.

Thursday April 19: No rain at all today or last night. Cloud drift from the SE.

The Huon called in on return to Samarai from Esa'ala to deliver Womersley's camera equipment left on board yesterday. Got letters away.

Botanizing about a mile inland to the Lebudoim River, which was struck just below where it emerges from the mountain. Had to cut track about half the distance, mostly through tall forest rich in big timber trees. River channel very bouldery (plutonic rocks); about 100 yards wide where we came to it, narrowing to a bed of perhaps 40-50 yds. and actual stream of 20 yds. where it came out of the mountains. Big change in vegetation with the beginning of the hills. A Casuarina abundant on steep rocky slopes. A magnificent red Hoya climbing on the river bank; 2 Selaginella spp., Boea, and a fine yellow Curculigo on steep rocky banks. A crayfish found eaten by what I take to be Hydromys. This looks like the gateway to the mountains. Found a faint track on the west bank of the river but did not attempt to follow it.

Friday April 20: The first rainless day here. At least it was almost so. No rain in the night and none till about 4:30 pm when a very heavy shower fell.

Much fruitless shooting at small bats at dusk last night (3 specimens of the little Miniopterus for over 20 shells). Two cuscus and a Petaurus jacked by Lionel one Rus (Gray with them); a Petaurus, small Dobsonia (or Rousettus) and a Uromys by Tinker. A big Hydromys and several of the small gray rats in traps. In all, 16 specimens on the mammal table on which Rus and his two boys worked all day. No shooting this evening and no traps set by Rus. Three Pogonomys brought in alive by a native were bought for 4/0.

Spent all morning working on material on hand (collected over 20 numbers yesterday). A few trees collected near camp in the afternoon. The big Hoya of yesterday photographed in color.

Womersley and Gray walked to Sewa Bay and back and completed their inspection of Izod's timber area. V.G. Ginger of Sibodia on Sewa Bay reported in to talk mountains. The route from Sewa Bay follows the Lebudown River, at least for some distance, to what used prewar to be the camp of a gold miner named Ballantyne. An effort being made to get carriers for a start on Sunday as Womersley wants to go with Lionel and wishes to leave for Samarai on Wednesday of next week.

Sat. April 21: Only a few small showers. Wind seems to be northerly in am, changing to east or SE in the afternoon.

Womersley and I to the Lebudawa River. Rather poor morning. He climbed up the rather open rocky and sedge-covered far slope to about 500 ft. and reported a thin stand of Casuarina and small kasikasi (Metrosideros sp.) with low growths of other Myrtaceae (Rhodamnia etc.) and a small leaved Wikstroemia that looks something like a Melaleuca.

Nothing of interest in traps. A purplish cuscus shot last night by Tinker. Two



his native assistants with him, Michael, a Western boy.

About 5:00 pm Michael returned from the mountain behind the house. Got up to 2000 ft., he reports, in very rough rocky country. This took seven hours. Could not find better country on a steep side. He had passed conditions above 2000 feet. Geophila abundant, and reaching a diameter of about 1 inch above about 1500 feet (he brought down leaf specimens). Went for a route into the mountains still by the route of the New Bay V.C.

Thursday April 19: No rain at all today or last night. Clouds drift from the E.

The rain called in on return to Sumner from the hills to deliver the day's work. The rain called in on return to Sumner from the hills to deliver the day's work.

Got walking about a mile inland to the mountain river, which was a track that below where it emerges from the mountain. Had to cut through about half the distance, mostly through tall forest with in big timber trees. River channel very narrow (about 100 yds wide where we came to it, narrowing to a few yds. between 40-50 yds. and actual stream of 20 yds. where it came out of the mountain). Big change in vegetation with the beginning of the hills. Geophila abundant on steep rocky slopes. A magnificent red fern climbing on the river bank; Calceolaria spp., and a fine yellow Geophila on steep rocky banks. A crystal found after by which I take to be Hydrophila. This looks like the gateway to the mountain. Found a faint track on the west bank of the river but did not attempt to follow it.

Friday April 20: The first rainless day here. At least it was almost so. No rain in the night and none till about 4:30 pm when a very heavy shower fell.

Much fruitless shooting at small game at last night (2 specimens of the little Manipulator for over 20 shells). Two crows and a Geophila taken by Michael one hour (over them) a Geophila (or Geophila) and a Geophila in all. Geophila and several of the small grey rats in traps. In all, 10 specimens on the ground on which the two boys worked all day. No shooting this evening and no traps set by him. These Geophila brought in alive by a native were brought for A.C.

Spent all morning working on a trail on a hill (collected over 20 specimens yesterday). A few more collected near Sumner in the afternoon. The day of yesterday photographed in color.

Tomorrow and day walked to New Bay and back and completed their inspection of the timber area. W.C. (finger of Michael) on New Bay reported in to talk tomorrow. The route from New Bay follows the mountain river, at least for some distance, to what used to be the camp of a gold miner named Ballinger. An effort being made to get permission for a camp on Sunday. As tomorrow was to go with Michael and wishes to leave for Sumner on Wednesday of next week.

Sat. April 21: Only a few small showers. Wind seems to be northerly in an evening to east or SE in the afternoon.

Tomorrow and I to the Delaware River. Rather poor morning. He climbed up the rather open rocky and sage-covered hill slope to about 200 ft. and reported a thin stand of Geophila and small Geophila (Geophila sp.) with low growth of other Geophila (Geophila etc.) and a small Geophila (Geophila sp.) that looks something like Geophila.

Nothing of interest in trees. A Geophila species seen last night by Michael. Two



12 26

Pogonomys brought in by a native. No shooting this evening.

Lance Wilkinson, a Milne Bay trader who has stations on the east coast of Normanby, anchored in Waikaiuna Bay and visited us this evening. He drank much OP rum and did not depart until everyone else, including me, had gone to bed. An interesting chap. A correspondent of PIM and does some other writing, including verse. Performed on the harmonica accompanied by sticks.

Sunday April 22: No rain at all, night or day. Hot in afternoon in the buildings.

No carriers turned up last night for a start into the mountains this AM, but V.C. Ginger has been here this evening.

Nothing in traps. One Pteropus shot this evening by Rus. During the day Lionel took two boys to the coconut plantation and got eight bats of two species from hollows in the trunks of the palms. We don't have with us the means of identifying bats.

Botanizing up the coast to the mouth of the Lebudowa River, then down to Izod's plantation. A scattering of big leaning calophyllum along the narrow gray-gravelly beach; strips of grass where gardens have been; a Pandanus common on these grassy patches. The Lebudowa has one sandy mouth in which Izod keeps his launch; good sheltered anchorage for a small vessel. Most interesting plant was a bignoniaceous tree growing gregariously on a small point of land north of the plantation. Bunches of brilliant orange-red flowers 10 cm long. The sea has raised on the point a narrow barrier of gravel immediately behind which is swampy tall rain forest luxuriant with climbing aroids, etc. The red-flowered trees, 40-60 feet high, with light brown trunks conspicuously fluted for some distance up from the ground, grow on this gravel bank, their roots half in salt and half in fresh water.

Monday April 23: Light showers beginning about noon. Mist or rain on the mountains late in the afternoon, but apparently clear tonight. The SE season would appear to have begun.

At 6:30 AM Lionel and Gray, with Wormersley's boy Michael, Lionel's Tinker, 6 carriers with loads, several spares, the Sibodia VC, etc. started on a second attempt to find a camp site in the higher mountains. Wormersley was to have gone but he developed an attack of malaria last night (on paludrine suppressive medicine). I left in the same direction soon after seven. Found the party had followed the bed of the Lebudowa River, so started to climb the leading spur which parallels the stream to the west and soon got onto an old trail. Trail much overgrown (probably not used since about the outbreak of World War II), not blazed and therefore hard to follow except where the ridge was narrow. Ascended to an estimated 1200 feet; Lionel has my aneroid. The trail must lead to Balantyne's mining camp, and it will offer an alternative, all weather route for us if the trail or route up the river is difficult, as I suspect. Another day of cutting past by far point would probably be necessary to open ridge route.

From the beginning of the spur to about 1000 feet (by my guess) the forest is spindly and a Casuarina is practically the only tree of any size (up to 20 m or so). A Gordonia also occurs, and a variety of small leaved, spindly little trees provide a usually plentiful undergrowth which took considerable cutting. Soleria, a Gahnia and a flat-leaved large sedge form a ground cover up to 1 m high in the more open parts of the forest on the narrower crests. A Gleichenia came in in one place. Near my top point the forest improved greatly. The Casuarina dropped out and Dacrydium elatum appeared in trees up to over 1 ft. in diameter with very dark brown bark. A delicate Selaginella, about knee high, was abundant as ground cover there. A slender soft-stemmed scrambling bamboo fairly plentiful in places between about 500 and 1000 feet.








19 (27)

Tuesday April 24: Showers from dawn to mid morning. Very hot after that. Wind from northeast again.

Spent morning preparing yesterday's plants. In afternoon went through the forest down Izod's south plantation boundary survey line to the coast. Tall gloomy forest offering very little to collect.

A flying fox shot last night (nothing in traps) brought total mammal collection to 96 specimens for two weeks.

Soon after 6 AM Ailsa Hall walked into camp, having arrived at the anchorage at three o'clock on the Kedeluma en route for Goodenough and Ferguson. The boat brought a little cargo for us and local letters.

At noon the Rev. Grant and his wife arrived to visit the Izod's and called on us. Grant is Chairman of the Methodist Mission of eastern Papua. Lives at East Cape. Has been in the country 24 years. Told of bat caves at Bunama, down the coast of Normanby, and others, and a burial cave on the NE coast below Sawataitai Bay. 

Lionel and Gray returned from the mountains about 4 o'clock. Their aneroids differed, but averaged about 500 feet for a camp site chosen. This is not far from the sharp-topped tambu mountain which stands out clearly on the SW part of the island in from Bwasiasia. An old track followed most of the way to Ballantynes camp at about 900 feet. Track out from there to a bit over 3000 feet. A belt of Dacrydium forest just below the camp site. Route reported practicable for box loads. Several crossings of the Lebudowa, then mostly a gradual ascent by spur ridges. The VC and Tinker left behind to clear the camp site. A promising outlook for our mountain work. Gray brought down specimens of an oak.

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mountain work. They went down a stream to an old  
The US and British before being discovered. A woman was killed and  
General assistance of the Indians, then mostly a general assault on the  
Lacandon forest just before the war. Some reported to estimate the box  
camp at about 500 feet. Then out from there to about 3000 feet. A belt of  
land in the west. At the head of the river most of the way to the  
the short-toed woodpecker which was very clearly on the left of the  
filled, but averaged about 500 feet and was a cross. This is not far from  
Lima and they returned from the mountains about 4 o'clock. Their encounter



Wednesday April 25: No rain today. Cloud drift and a good breeze from the NE.

The Administrator's yacht Laurabada II, en route from the Anglican Mission at Wedau, picked up Womorsley and Gray for Samarai about 7 AM. Sent to Buntings for storage five packages of dried herbarium specimens.

Botanized north along the government track to the top of a ridge about 200-300 feet high which must be near Sibonai village on Sewa Bay. The map seems to be inaccurate for this locality. Fine tall forest to where the track crosses the Lebudown River which there consists of several dry gravelly channels. Beyond these channels is 200-300 yards of swamp across which the track is carried more or less on parallel pairs of small logs; a fine tree-fern (Cyathea) collected in the swamp. Swamp luxuriant with clinging aroids, pandans, etc. Only one of the tree-ferns seen.

A Petaurus and a Petaurus (sic) shot last night by Rus, accompanied by Gray. A Hydromys and one of the small gray rats in traps set by boys. Total of about 150 traps out. Lionel has meat lures and steel traps out for Satanellus.

The boys who were left yesterday to clear the mountain camp site returned about one o'clock. They cut tent poles, split palm for floors, etc. This exploration party much overloaded with VIP's. Two village policemen and three councillors, all expecting pay. Have asked for 35 carriers to sleep here Sunday night ready for a start for the mountain camp early Monday.

Thursday April 26: Only a small shower at daylight; hot day; wind still from NE.

Followed my track (improving it for the carriers) to the Lobudown, then down the stream to a bit past the intersection of the government track to Sewa Bay. Half mile or so down from where I struck it, the Lobudown rather suddenly disappears (the water rather) under the gray gravel of the bed. The water apparently reappears in the swamp visited yesterday. Nothing of particular note in plants. Vegetation of banks largely the common regrowth fig (Ficus aff. cascaria). A few smooth sago palms below the govt. track.

Nothing fell to the guns last night. Nothing in traps. Lionel caught something in his Satanellus trap, but it got away after much struggling and biting of the wood of the cage under which the 4 steel traps were set as a precaution against catching some domestic dog.

Lionel and Rus to Bunama in Izod's small launch. About 4 hours each way. They returned about 5 o'clock, without having found the caves or being able to find out anything about them from the local people. Izod wrote me about these supposed caves some time ago. Rev. Grant spoke of them too days ago and on his information I marked their position on the map. There may not be any caves there. The local natives may have been suspicious of our intentions and therefore denied knowledge of them. Cave burial was formerly practiced by the people of Normanby.

Had as visitors today Father McGee and Brother Gormley of the Catholic Mission of Sedeia Island. They came to see Izod and were much interested in inspection of his sawmill. The Catholics have a station in Normanby. They have become very active in far eastern Papua since the war.

Friday April 27: Another hot day with some breeze from the NE and a few light showers after 11 AM.



Wednesday April 23: In the morning, a good breeze from the west.

The animal which was brought in, an adult male, was taken from the middle of the stream, picked up by the boatmen about 10:30. Sent to the laboratory for storage in a box with a good bedding of straw.

Botanized north along the riverbank, took to the top of a ridge about 100-200 feet high which was near a small village on the left. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge.

A lizard and a snake (both) were taken from the ridge. The lizard was a small one, about 10 cm long, and the snake was a small one, about 10 cm long. Both were taken from the ridge.

The boys who were taken from the ridge were taken from the ridge. The boys who were taken from the ridge were taken from the ridge. The boys who were taken from the ridge were taken from the ridge. The boys who were taken from the ridge were taken from the ridge.

Thursday April 24: A small number of birds were taken from the ridge.

Followed by the ridge (moving) for the morning to the laboratory. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge.

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Friday April 25: A small number of birds were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge. The ridge was covered with a dense forest of trees, mostly of the species which were taken from the ridge.



Botanized up the nameless and unmapped creek to the south. Followed it into the hills at about 500 feet. At that elevation were two boggy patches of sago swamp. One of prickly trees the other of smooth. No old trees, but saw where one had been cut for sago several years ago. Creek in the hills is very rocky and falls rapidly. Most interesting plants were ferns, including two Hymenophyllaceae which gave a mountain appearance to the rocks on which they were massed. My last day in the field before we go into the mountains.

One small gray *Rattus* in traps last night. No shooting. A small goanna in Lionel's meat lure set. Tinker set out for Sewa Bay and Mt. Bwebweso this PM to try to shoot a wallaby. These animals reported to live on that grassy spirit mountain. Tinker instructed to get two local helpers and try for the wallaby early tomorrow morning.

Neglected to record a couple of weeks ago the disposition of the boys:

Mammals	Liklik and Isulele of Morima ) Tubuvagata of Goodenough )	Rus
Plants	Edewawa of Goodenough ) Taugova of Morima )	
Insects	Galewina of Kalokalo )	Self
Kitchen boys	Kim of Goodenough	
Vauvaumela of Kalokalo		
Spare boy	Kwailakwaila of Kalokalo, most of whose time is spent in search of arboreal mammals	

Sat. April 28: Only threats of rain; day partly overcast. Cloud drift from SE in morning, from E later. Hot in the clearing.

In camp working on specimens and organization of cargo for Monday.

Last night was good for mammals. Two cuscus, 1 Petaurus, 2 Pteropus and 1 Rousettus or small Dobsonia shot by Rus and Lionel. One small brown Rattus in traps Tinker returned from Mt. Bwebweso, feeling "ashamed" at not having got a wallaby on the grass country. He brought from the mountain branched and seedlings of a conifer which looks like Araucaria (allied to A. Cunninghamii). (Dacrydium)

The day on which weekly items of rations (meat, tobacco, etc.) are issued to native employees is always "Saturday". Usually the day is Friday. Our issue day is indeed Saturday, and this afternoon about half a dozen young native ladies turned up to share in what was to be had. A friendly island.

Sunday April 29: One or two slight showers; much cloud over the mountains; cloud drift variable.

No jacking last night. Three of the big bristly brown Rattus and one of the small gray trapped last night by Rus; the first mammals in personal traps. This brings the total to date to 113 mammal specimens of a dozen (perhaps 13) species.

Lionel and I spent most of the day in preparation for departure for the mountains. We have on latest count 36 loads including carriers' rice. This evening we have fed 38 prospective carriers brought in by two councillors and a VC from Sewa Bay. A Sawataitai councillor came in this morning, offering help ~~if~~ with carriers if needed. If we can't get men, said he, he will bring women. The response in carriers has been fine. All we need now is reasonable weather for what will probably be a rather hard day of travel tomorrow.



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On the day of travel tomorrow, I will need you to be a better person than I am today. I will need you to be a better person than I am today. I will need you to be a better person than I am today.



April 30, Monday: Left Waikaiuna at 7:15 with 43 carriers and reckoned about 35 loads, including rice for carriers, but Lionel is not a precise organizer and fortunately, more carriers offered than were needed. Some carried light loads. Eight were from Sawataitai on the east side of the island..

LEBUDOWA River reached at 7:35 (about 1 mile). Crossing it four times we started up a long steep slope and reached Teddy Ballantynes former gold workings on BUATAI Creek at 9:20. Alt. 290 m. Tree ferns and birds of paradise (*P. decora*) a little below this. Here well massed tall rain forest. Creek very bouldery and with moderate fall. Stayed over an hour and had drink of tea while the carriers cooked rice.

10:45. 580 m. Moved on (alt. 280 m.) up creek a few hundred yards. then fairly steep climb in places but slopes generally gradual

12:20, 550 m. Forest of smaller trees in which *Dacrydium* appears; many surface rocks; scrambling slender bamboo and a climbing *Nepenthes*. Rain forest.

620 m. First oak noticed in the stunted forest (it was cut by Gray a week ago. Slender. Not a change to regular mid-mountain forest.

650 m. *Dipteria conjugata* growing beside a 30. 30 ft. *Dacrydium* which Ted and Lionel climbed to view Sewa Bay on their reconnaissance.

660 m. Distinct changes in stunted forest of *Dacrydium* and smaller leaved angiosperms. Much *Sphagnum* on ground, scrambling *Lycepedium cernuum*; a bladderwort growing in mass on one tree.

720 m. Lookout Knob. Coast and a small ship visible. Many palms and a change in good tall forest swamp camp site about  $\frac{1}{2}$  mile ahead. OBIA prominent to right.

710 m. *Dacrydium* forest ended on a steep small rocky stream.

2:15 (I) Camp reached. Lionel, most of our own boys and a few fast carriers ahead of us. Alt. 730 m. Camp on PABINAMA Mountain in what appears to be tall "mossy forest". Forest composition still to be seen. An epiphytic red *Rhododendron* flowering on edge of camp clearing. Alt. at 4:30 700 m. Some mist from mid-afternoon into evening.

Two flies and two tents rigged; a palm shelter for cook house. Good level ground. A little moss clearing will open up a good view of the coast and the S. edge of Good-enough Bay on the mainland. Lionel and Ted did an excellent job in opening up a route from Ballantyne Camp and picking the camp site.

On their recon. trip Lionel made camp altitude 730 m. 2770 ft. We seem to be only a few hundred (500-7000 feet below the summit of the sharp-topped tambu mountain) BIA (3400' on the 1 mile map), so our altitude is probably about what Gray made it — say 2700 ft.

Monday May 1: Continued light rain before dawn. Nothing later, into evening. (7:30). All hands spent most of day in preparing this PABINAMA Camp. Digging latrines, making work tables of sticks and split palm, etc.

Carriers given breakfast of rice paid 7/ each, and sent back to their villages. Sent with one of the three escorting councillors; a letter to Norman Ized posting him on events.

Did some botanizing in afternoon. A common small tree-fern (*Gyathea*) 4 tree spp., etc. collected. A *Xanthoxystus* (a *Dicospernum*) fruiting plentifully in the forest indicates that this is what I have called "mossy forest". Forest canopy at camp about 60 ft. high. Nearly all small-leaved trees.

About 115 traps out this evening. Several *Petaurus* calling around Camp. Some







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shots fired at a small bat frequenting a small-leaved tree with acid white fruits common in the forest (*Acronychia*?).

Wed. May 2 A very slight shower in afternoon the only rain. Mist towards evening. also daylight (5 AM) but stars and moon shining through.

Went up the slopea Pasinama to the end of the cut track at 805 m. (alt. in camp when I left 730 m.). Then cut to crest at 825 m. (later 840 m.). Stunted *Nothafagus* and other broad-leaved plants with *Nepenthes*. *Dipteris conjugata*, a great erect *Gleichenia* ceous fern found in 1933 on Mt. Dayman and Goodenough Id. and protruding above it on the South slopes on open stand of *Dacrydium* stunted to 3-5 m. A filamentose red fungus (?) conspicuous on branchlets of the conifer.

Clouds obscured distant views from the crest, but got a glimpse of the Bunama promontory. Mt. OBIA base 228 magnetic; a southerly peak appearing about equal in height was 140. Sounds of an axe, probably in camp, 305. North end of NUKATA Island 185.

The beach was a good find. Collected were several trees of the mossy forest unfamiliar to me. An abundance of slender scandent bamboo in forest generally of open canopy, probably as a result of damage by hurricane winds years ago.

Russ followed the track in the afternoon and now traps are set up to the crest. Mammal signs (?) include up rooted yellow clay under moss-tented tree roots, and what looks like runways ~~which lead into the vital fruited trees last night~~: 2 *Nyctimenes*.

Thursday May 3: Mist on and off a good part of day after 9 AM; some smart showers noon to 2 PM.

Botanized down the track in the stunted, open, heavily mossed *Dacrydium* forest. The conifers only 30 ft. high at most; *Myrmecodia* and *Hydrophytum* (very stout species) its branches. A *Colophyllum*, in flower, was plentiful as a tree 5-6 in. tall. A *Nothafagus* there also; not seen in quantity, and seemingly different from the one found on top yesterday. Another *Nepenthes* there too, looking like *N. mirabilis* and having the mousy flower odor characteristic of that wide-ranging species. A leafless sedge (#25656), with green stems usual several meters long, a nuisance in this forest; a slender, tall, sharp-edged *Selesia* also.

Climbed a *Dacrydium* at ca. 750 m. and made photos of Mt. Obia. Lionel took some bearings from camp. Duchess Island 302, Anne Inlet Island 242 magnetic. Saw the weekly PHV 2 in flight toward Samarai.

Four bristly gray, short-tailed *Rattus* apparently different from the lowland species, caught in traps.

Lionel's boy sent down the slopes to shoot for the pot, returned with one blue pigeon and an old male *Paradisaea decora*. The Paradise bird prepared as a skin by Russ.

Friday May 4: Occasional clouds down in mountains from about 9 AM; showers, come heavy, about 11 to 4 o'clock. Clear, starry night. (8 PM).

Had some trees below camp cleared today to give view of coast. Great expanse including islands off Sewa Bay, West end of Fergusson, and all the peaks of Goodenough. Lionel at dusk tried to signal two small vessels in sight; no response.

Botanized in a small creek less than  $\frac{1}{2}$  mile on the steep slopes to the SW toward OBIA. Nice lot of fern including *Vandenboschia*, *Leptopteris*, and a second *Cyathea* for the locality. Two very interesting small rubiaceous trees, one with curiously enlarged calyx in fruit and long, frequent white flowers.



There were also a few small, but very numerous, black flies (Simuliids) common in the lower (submontane) zone.

July 2 A very slight shower in afternoon and rain. High temperature 85° F. at 10:00 a.m. and 80° at 4:00 p.m.

Went to the slopes of the mountain to the east of the lake at 10:00 a.m. (10:15 a.m. to 1:00 p.m.). Found a very good collection of insects. The most numerous were the black flies (Simuliids) and the large brown flies (Tabanids). The black flies were very numerous on the slopes of the mountain and on the lake. The Tabanids were also very numerous on the slopes of the mountain and on the lake. The black flies were also very numerous on the lake. The Tabanids were also very numerous on the lake.

Collected a few black flies (Simuliids) and a few Tabanids. The black flies were very numerous on the slopes of the mountain and on the lake. The Tabanids were also very numerous on the slopes of the mountain and on the lake.

The beach was a good find. The black flies were very numerous on the slopes of the mountain and on the lake. The Tabanids were also very numerous on the slopes of the mountain and on the lake.

Went to the beach in the afternoon. The black flies were very numerous on the slopes of the mountain and on the lake. The Tabanids were also very numerous on the slopes of the mountain and on the lake.

Collected a few black flies (Simuliids) and a few Tabanids. The black flies were very numerous on the slopes of the mountain and on the lake. The Tabanids were also very numerous on the slopes of the mountain and on the lake.

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18  
32

Four gray Rattus in traps, a Nyctimenes shot last night, and a dobsonia from a mossy tree. by Lionel.

Getting more plants than I can deal with in the evening. Pickled a bunch today.

Sat. May 5: No rain last night. Clear until nearly daylight. The coldest night so far. Temperature at 6 AM 65°F. Intermittent mist and rain all day (some heavy showers) from 8-9 to 3-4 o'clock.

Too much rain and visibility too poor for satisfactory botanizing. Worked in new territory opened up by Lionel yesterday. Close under crest of mountain. Wide nearly level shelf of several acres (as far as seen) covered with good tall mossy forest (only open underneath and easy to get about in. Composition about as at camp level, but a beach is a canopy tree. Collected a Lyzygium with small leaves (7.5735) and white subacid fruits which is an important dominant all through these forests (fruits eaten by Petaurus and Nyctimene at camp). Also gathered a tall palm common in the mossy forest of this and neighboring peaks, which has the appearance of a slender coconut.

One rat and a rail in traps. No shooting. Lionel and Lik-lik camped tonight to trap and shoot on the flat ground mentioned above. Found there today the spadix of a palm from which a grub appeared to have been removed by a Dactylopsila.

Tinker to WAIKAIUNA for mails and on to Sewz Bay to try to get a native to get come up here with with hunting dogs. One of the councillors was supposed to have brought his dogs before this.

Sunday May 6: Max. 27°, min. 18.5°C. The usual clear night. Followed by clear until about 10:30 AM. Cloud of heavy showers after that to near dark. Wetter day so far. Sky now (7:30) starry.

Opened a new trail across the water place stream and a bit N of summit. Got into Dacrydium there, so cut up to "Lionel's plateau". Poor morning before rain sent me back to camp. But collected male flowers of the Nothofagus sp. first got in the Dacrydium forest at 750 m and here a small canopy tree in tall mossy forest.

Nothing in traps. Nothing shot. Nothing from Lionel's night camp.

Tinker returned from Waikaiuna with a big lot of mail, including a letter written by Geoff Tate. One from the Rev Cruttwell of MEANPI tells that "in 1954" he followed our trail Maneau, camped two nights at our # ? Camp, and from then went to the summit.

We had to burn lamps in tents today to dry moss collections and clothes.

Monday May 7: Clear night: Mist driving and sharp showers from about 9 to noon. Clear and mostly this to dark; air very hazy; wind from N and more boisterous than hitherto. Max. 26°, min. 18°C. Botanized up to the crest and there with much trouble (mist and rain) made a few photos. This crest above us seems to be the 3400 ft. summit of the map, although I have never in three visits had clear enough weather to see all around.

Two Nyctimenes shot from fruiting trees at camp during night by Rus. Eight Pogonomys cut from hollow tree, five from a bit above camp level by the mammal boys, three from about ft. below camp, by Lionel and his Gay. Measurements indicate the species the same as on the lowlands of WAIKAIUNA.

Tuesday's mail brought word from Bunting that they expect to send a boat to move us to Fergusson Id. on the 19th or 20th. This is a day or two earlier than I asked.



from the station to the station, and the station from the station.

Setting out from the station, the station from the station.

800-1000. The station from the station, the station from the station.

For many years and years, the station from the station, the station from the station.

The station from the station, the station from the station, the station from the station.

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The station from the station, the station from the station, the station from the station.



19 (33)

I have therefore decided to move down to the coast on Saturday if carriers are available. Saturday is market day on the coast, when natives take their copra to the trade stores, etc.

Tuesday May 8: Max. 26, Min. 19 C. Boisterous weather, wind whipped the treetops all night; accompanied by ~~snow~~ and some drizzle. Wind somewhat-abated by the afternoon. No rain. Went down the trail to about 700 m. (620 m. by my anuroid on April 30) and then collected the oak seen on the way up. ~~Flowers only~~, and only a subsidiary tree in rather stunted MIXED rain forest. Nothing else of special botanical interest although the first Freycinetia for the trip collected. Big species with soft, almost leaves and yellow ~~flowers~~ fruits.

A good day for mammals. A Nyctimene shot last night by Lionel on his "plateau". Two gray rats in traps set by ~~my~~ Rus's boys. Four Pogonomys cut from a tree by Lionel and his boy, plus "Lipoma". The prize was a brown Phascogale trapped by the cook; heavy-set animal, a male; pencil drawings by Rus.

Wed. May 9: Max. 27.5, Min. 19 C. The northerly wind not so strong, but continued through the night. Weather still from north today; mist much of the time; light sprinkles from one o'clock through afternoon. Went to the summit of PARIMAMA for the fourth time to make pictures. Eventually got several half misty ones of OBIA with East Cape under its south shoulder. Few plants collected. In afternoon sent boys into the Dacrydium forest for an orchid with spotted leaves which grows here and there in the Sphagnum ground moss. It turns out to be Papillopedium (?) of which a species collected by me in the Balim Valley in 1938 was such a prize that it was named for Queen Wilhelmina. Like Cypripedium dull purple brown flowers much damaged by insects (?)

Another good day for mammals. The prize a black Hydromys this time from the small stream SSW of camp. A Rattus also in traps. Five Pogonomys cut from a tree.

Lionel went down to WAIKAIUNA to arrange for carriers for Saturday.

Thursday May 10: Max. 27, Min. 18.5 C. Cloud drift still from N but wind down to a gentle breeze. No mist in camp. No rain. Petaurus resumed calling in the tree tops last night; they were silent and few bats came ~~xxxxxx~~ late to feed during these windy nights.

Botanized in the direction of Mt. OBIA about  $\frac{1}{2}$  mile down the ridge of a canyon-like ravine to about 750 m. altitude. Rain forest - mossy forest transition zone. Got three large Cyathea spp. from the ravine and a hairy Dicksonia from about 800 m. This makes 6 spp. of tree-fern collected thus far.

Not brisk today for mammals. One in traps Melomys, a brown animal which I think is the second record of the genus for the D'Entrecasteaux. Van you got one on Goodenough in 1953. Four Pogonomys cut from a tree by mammal boys sent in search of Cuscus.

Friday May 11: Max. 27, Min. 18.5 C. Rather windy again last night and today. Intermittent small mist clouds. Wind from N to NE. Very hazy today. Strange weather and, fortunately, rather dry in the mountains. The SE trades should be blowing steadily in May. No rain.

In camp, drying specimens and preparing for tomorrow. Lionel will not come up the mountain with the carriers.

One Rattus in traps and one Nyctimene shot in camp by Russ last night. Some special traps being left out tonight.



THE UNIVERSITY OF CHICAGO



An almost final count ~~fm~~ of plant collections for the camp gives 186 numbers (including cellular cryptograms) and 827 sheets of specimens. It could have been better.. The flora is not rich. Insect collection has been poor; very little any night from the light trap; hardly any butterflies; best result in damselflies; only one dragonfly caught. There is not enough open habitat for butterflies and Odonata. Frogs, with 7-8 spp. have turned up fairly well. Few lizards (perhaps 2 skink and 1 gecko spp.); no snakes. A small eel from the little stream to the SSW.

Was getting anxious about carriers when a call came from down the trail. By dark 32 carriers (by report), four councillors and 2 V.C's dragged into camp. Lionel had given them rice to eat on the way.

One man brought the biggest beetle I have seen. A longicorrmassively built: 8 m. in body length, 28.5 m. in total length.

Mammals collected at this camp: Melomys, a Phascogale, Hydromys, Rattus, Nyctimene, Dobsonia, Pogonomys, Petaurus fed in trees at camp but not shot. Signs of what must have been Dactylopsila or Dactylonax were found. Total specimens: 46.

Saturday May 12: Left Pabinama Camp between 7 and 7:30 (I'm still without a watch). Stayed behind the carriers and collected from about the 750 m. level to the Lebedowa River, where I had lunch. Reached Wakaiuna Camp at 3:45 with a good lot of plants new to the collection.

At least one species of oak abundant and reaching large size in mixed rain forest between about 1200 and 1000 feet. Characteristic coppice growth observed; also prominently lenticellate bark; only flowers seen; no acorns seen on trees or ground. I missed these big oaks on the way up. A spindly woody undergrowth and an abundance of a coarse Selaginella and some few coarse ferns on the ground give a suggestion of mid-mountain forest. But this is mixed forest; a transition between rain forest and mid-mountain; not a forest of oaks and Castanopsis. The latter not seen. This forest noticeably dryer than the rain forest above it and below it.

Some immense trees of unknown identity on the slopes above the oaks. Below the site of Ballantyne's old camp, on the drop down to the Lebadowa at about 700-800 feet, found a great breadfruit tree (Artocarpus) in tall, apparently primary rain forest. Very prominently flange buttressed; could not see any fruits. A very tall but much younger tree of the species a hundred yards or so down the slope. Saved a leaf. Previously I had the idea that the breadfruit of New Guinea was always planted by natives. Ballantyne's mining boys were the only native population I know of in the area. The big breadfruit tree was old for a rain forest tree.

Between about 2000 and 1500 feet heard and watched a solitary male Paradisaea decora in a tall tree. Apparently quite alone. Noticeably smaller than the red bird of the mainland. The two wire feathers and others of the tail much curved out to the sides as the bird sat erect, uttering frequent calls, on a branch well down from the top of the tree.

The mountain much drier than when we went up two weeks ago. Izod says little rain has fallen at Wakaiuna (it is spelled Waikaiuna on the map; local pronunciation is Wakaiuna.)

Lionel failed in an effort to collect the wallaby which inhabits the grasslands. Very energetically, on Thursday he went up to Sewa Bay and crossed the island to Sewataitai Bay. Spent that night at the plantation. Next morning hunted on the grasslands to the south. Saw wallaby signs (few) but none of the animals. Shot a weaner calf, of which we ate chops tonight. Described the open country as on basalt such as occurs in the cattle country of North Queensland; slopes go up steeply to 3000-ft. Bwebeso. Says a stunted broad-leaved teatree grows on the grassland; quantities of







what would appear to be a big, cutting Scleria. Cattle eats the heart out of young Pandanus. The wild cattle, estimated at 3000 or more, originated on Sewataitai plantation. Have been going wild for years; process hastened during the war, when the plantation was abandoned. Lionel returned to Wakaiuna this morning. The round trip took about 12 hours.

Sun. May 13. Dry weather continues, and the heat, too. No rain and very little cloud.

My day spent in looking after undried material brought down from the mountains and in preparing the 50-odd plants collected yesterday. The latter bring my collections for the mountain trip to 226 numbers (52 bryophytes and 1 fungus included) and 1015 herbarium sheets.

Only of the small gray *Rattus* in traps. Liklik, out jacking last night, got nothing; Tinker wounded a pig and after it again this morning encountered a local man with a big boar bailed up, which he shot. Our boys got half the meat.

Some time before we went up the mountain, a local boy who works for Izod told Lionel of a bat cave near a waterfall some little distance up a ~~stream~~ small stream which runs into Awawiwi Bay about  $1\frac{1}{2}$  miles S along the coast. It was arranged yesterday for this boy to guide Lionel and Rus to the place today. The local, however, was engrossed in a game of cards on the beach and refused to go. Some of those natives are pretty poor types. The Councillor of Sewa Bay who was supposed to join us on Mt. Pabinama with his dogs did not turn up. His story was that a crocodile ate one of his dogs and the remaining one would be useless alone. Cupidity probably solved our transport problem at least one family did well out of it—that of a village policeman who brought his wife and her sister and his two sons to carry both trips at 7/- per load. According to custom, the VC himself got a day's pay.

Monday May 14: Dry and hot. Breeze remains N or NW. This soil must hold water well; there is no wilting of the softest vegetation.

Botanized down to Wakaiuna Bay and back up the government track and home by an old timber hauling trail. Nothing of special interest. Several substage trees have come into flower since we went up the mountain. One of the big dipterocarps showing great numbers of young fruits. Have still to collect this. My boy Edawawa got a nasty cut over an eye by a flying stick and I went back to camp early to dress his wound.

Sent Buntings a radiogram about collecting supplies for Fergusson Id. (all supplies were organized before we left Samarai.)

A young, spiny brown rat in traps last night. A *Petaurus* and a small *Pteropus* shot by Lionel and Rus; a purplish cuscus by Lionel's boy. The mammal department suddenly finds itself clean out of bait. Not a scrap left from 6 quarts brought five weeks ago. Traps must have been baited with lavish hands. Fortunately we have in foodstuffs the ingredients necessary to make enough bait to see us through this camp.







Tuesday, May 15: Another hot dry day but more cloud and late in morning a threat of rain from dark clouds which built up over the mountains. Breeze NE to NW.

Followed the easternmost govt. road to the Lebudown River, thence up the stream a bit (bed dry there), then down along the stream to the coast. Not far below the east road the water of the river comes to the surface again in many small running channels in a swampy area overrun with Pandanus Copelandi and perhaps another pandan. We cut track for about a mile, then made north away from the stream and found a faint path leading toward the coast along the edge of the hills. This line of hills steep to. Number of native gardens on its lower slopes, some being cleared and fenced, others with well grown crops and if taro cassava and bananas. Small garden houses at these gardens. The owners seem to sleep on a platform underneath, and use the house for storage. Met one middleaged man, his flat-breasted and two children. Friendly, and the man spoke good pidgin English. At that point we were close to the coast and the western govt. road which we followed back to camp. A long morning for very little of interest in plants. A Pailotum collected in the swamp forest.

A big day for mammals, with about 15 specimens all told. Rus last night jacked a Uromys (3rd for the collection), a Pteropus and a cuscus. Lionel and his boy, taking a snack to the Lebudowa along my cut track, jacked along the stream after dark for three more cuscus. Sipoma, the spare boy, out this morning, found a hollow tree which yielded five Petaurus and four Pogonomys. Traps set by Lionel on the Lebudowa yielded nothing. He started up a small bandicoot in the bed of the river but could not get a shot in the long grass of that particular spot.

Wed. May 16: Weather as for the past several days except for a small shower between noon and one and one o'clock. The first rain for nine days, Rain fall here for April was 17.65 inches, for may to date, 1.36 inches.

Botanized on some of the old timber-hauling trails close to camp and got several good plants. One can see into the tree-tops where there are openings in the forest; otherwise, botanical collecting in these very tall rain forests will be pretty hopeless.

First bandicoot shot by Lionel last night, plus a cus-cus (I think there may be two cuscus species here) and a Petaurus. Two spiny brown rats in traps—one in traps set by Lionel over in the Labadowa. The bandicoot looks Edhimipera, and its tender skin gave the usual trouble on the skinning table.

Three small ships anchored off Waikailuna this PM. The Methodist Mission boat from East Cape here for electrical repairs by Izod, and collecting gravel. BP's Govilon, i/c Noel Alexander, on a recruiting trip and five days out of Nuatutu with Mrs. Hancock on board (in here to pick up sawmill wastes as firewood); and Jack Wilkinson's trading boat, visiting stations in Sewa Bay and along the coast. Last Lionel's brother Ernie dropped in from his trading post at Annie's Inlet on the mainland. He brought the news that Clem Rich, after two weeks on the drunk in Samarai, ending in the horrors in the hospital, has been fired from Doini Plantation by Steamships Trading Co. And a few days ago the great U.S. Loafmaster (?) cargo plane, carrying spare parts for the flight of five Canberra jet bombers on the way to the States, got lost and circled over Samarai to get a position. Clear weather. The locals are puzzled ~~over~~ about the navigating techniques involved.

Had a visit in the evening from Norman Izod and Jack Wilkinson. The latter came to the territory with his father and brother Lance to work for ~~his father~~ Cuthbert of the Misima Mines. Served in the war as a medical assistant (with ANGAU?) and was associated with with Dr. Vernon on the Yokoda Trail. Married to a half-caste (fide Lionel). Writes to the PIM. Has a good stock of humorous stories of the Territory. Told one about the late Teddy Mears of the "Elevala" on a secret agree with a henpecked district officer, drinking ink in the dark and thinking next day he had blackwater fever. Went into hospital for treatment (Samarai). Finished the ink and station business brought to a standstill.







Talk turned to flying saucers. Norman told of a night about two years ago when, anchored off East Cape, he witnessed a great magnesium-like flare falling over the mountains. Jack related a story about having seen over Misima in the evening about 20

20 years ago, travelling from low from east to west with a swishing noise, a great streak of bright. The same night the light appeared over Milne Bay, 140 miles to the west; shot over a coconut plantation, and in its path three rows of coconuts died. An account of the occurrence in Milne Bay was published in the Port Moresby newspaper.

Some jacking by Lionel, Rus and the boys; no results. A Uromys in a steel trap set by Kim the cook.

Thursday, May 17: Weather precisely as yesterday.

Went down to the coast via the tramline thence along the shore to the mouth of the Lobudowa. A common Grania, in fruit, probably the most important of a dozen plants collected; also a Grevillea. Very few plants left uncollected in the area—that is, species now in flower or fruit. The only one missed that I know of, and Pandanus copelandi and a beach-inhabiting species of the genus with big ovoid fruitheads.

Unsatisfied with the results of Galuwina as subsect collector, today I started to break in the spare boy Kwailakwaila ("Sipoma"). Not too promising. Energetic but seems to have a heavy hand. Galuwina is a dandy, always nicely bathed and shining of skin, and with hair garlanded or stuck with Hibiscus flowers. Because of his slowness in work he has been nicknamed Lightning by Lionel. Has cut his name in almost every log on the trails hereabouts.— "I am Galuwina, Kalokalo boy."

Heard from Lionel this evening the legend of Obia the Tembu mountain. Long ago, when women were scarce, there were two beautiful maidens who refused to take husbands. Finally, in punishment, the chief banished them to the mountain. He gave them eternal youth, but they had to stay on Obia for all time. There they still are, trying to get down to get men for themselves, but prevented from doing so by a guardian snake who formerly was their father or some other relative, who persuaded them not to marry in the long ago.

Letters for the U.S. left by the Govilon before daylight this morning.

Friday, May 18: Change in the weather. Wind in SE. Light showers from about noon into evening.

Collected up to about 1000 feet on the mountain spur this side of the Labudowa. Tried to follow what I take to be an old trail of Ballantyne's which leads up to the north side of the nameless creek, but lost it in a couple of places and cut new track up some rather steep, stony dry slopes. Villagers ascend about 400 feet to cut thin sticks of a yellow-barked underbrush tree, probably for house roofs. Pig signs up to about 1000 feet. Struck at 700-800 ft. the track I opened a month or so ago on the crest of the leading spur. Not much reward in the botanical results. Best things a Syngium of the canopy, last flowers of a Gordonia common on the spur, 2 Dianella species, a ground orchid, and a small-tree Exocarpus. Also a red-fruited Gahnia on the dry crest.

Two Hydromys in traps set on streams in the plantation. Two Pteropus and a Petaurus jacked by Rus last night.

Fairly early in the morning from the mountain I heard a loud engine noise, then saw a white-painted boat curve into Waikaimia anchorage. Returning to camp at noon I found Jack Wilkinson and Father Fallon there. They stayed for lunch. Good company. Fallon is in charge of three or four Catholic stations on the Normanby coast.

Wilkinson has two trade stores in Sewa Bay in charge of white men. Has 20 acres of coconuts planted at one station. Man in charge of this is a drunkard — when he has the wherewithal.



This turned to living creature. When told of a light about two years ago, the  
cloned all that time, he wanted a great specimen like it is falling over the  
area. Each related a story about having seen over the area in the evening about 10  
years ago, describing how it was seen with a glowing light, a great stream  
of light, the same night the light appeared over the area. The light was seen  
about over a certain position, and in the area there were of several times in account  
of the occurrence. The light was mentioned in the Fort Worth newspaper.

Some feeling by himself, and the power, in result, a story in a book, from the  
by him the same.

Wednesday, May 11. Weather on cloudy at yesterday.

Went down to the bank with the thermometer along the shore to the mouth of the  
Lodowick, a common spring in this country and most important of a good stream in the  
landed, also a few miles. Very few people have been in the area—just in the  
now in the area of the river. The water was very clear and the bottom was  
a brownish-yellow color, the water was very clear.

Unusually with one of the most of the river, today I started to  
break in the area by the river. The water was very clear and the bottom was  
to have a heavy sand. The water was very clear and the bottom was  
skin, and with some of the most of the river, today I started to  
in work he has been working in the river. The water was very clear and the bottom was  
log on the river.

Went from the river to the river, the water was very clear and the bottom was  
when women were seen, they were very beautiful and the water was very clear and the bottom was  
Finally, in the river, the water was very clear and the bottom was  
young, but they had to go to the river. The water was very clear and the bottom was  
down to get some of the water, but they had to go to the river. The water was very clear and the bottom was  
nearly was their father or some other relative, and the water was very clear and the bottom was  
long ago.

Went to the river, the water was very clear and the bottom was

Friday, May 13. Change in the weather. Wind in the night, the water was very clear and the bottom was

Collected up to about 1000 feet on the river, the water was very clear and the bottom was  
follow what I was to see an old ball of the river, the water was very clear and the bottom was  
the narrow creek, the water was very clear and the bottom was  
steep, along the river, the water was very clear and the bottom was  
bottom was very clear, the water was very clear and the bottom was  
stream at 700-800 feet, the water was very clear and the bottom was  
river. Not much water in the river, the water was very clear and the bottom was  
first flower of a Gordonia flower, the water was very clear and the bottom was  
a small tree, the water was very clear and the bottom was

Two Hydrangea in the river, the water was very clear and the bottom was

Today early in the morning, the water was very clear and the bottom was  
a white-painted boat, the water was very clear and the bottom was  
a Hydrangea and Hydrangea in the river, the water was very clear and the bottom was  
in a change of color, the water was very clear and the bottom was

At the river, the water was very clear and the bottom was  
some of the river, the water was very clear and the bottom was  
in a change of color, the water was very clear and the bottom was



Lionel last night told of the first Jap Zero shot down in the New Guinea campaign. It was done from a sailing schooner in charge of Lionel's father, Joe. The 91-foot vessel, with auxiliary power, built in New Caledonia, was running supplies for the troops. An Australian or U.S. plane was shot down. Evannett took its 50 mm machine guns and rigged them forward, and 30 or 35 mm. guns aft. The Zero came over and strafed the decks. All hands went overboard, except Bishop Strong of the Anglican Mission, who sat in his deck chair through the first phase. Then a line of bullets came down the deck and through the bible on the arm of the Bishop's chair. His lordship went over the side, red vest and all. Tiring of the show, Joe and his brother, who was the engineer, climbed aboard then shot the Jap down. This was somewhere on the NE coast of Papua. Jap crash landed on the beach. Was captured by the Evannetts and boat boys with shotguns. Later, Evannett was sent back by the military to pick up the plane and bring it back to Port Moresby.

Saturday, May 19: SE continues; measurable rain from showers from about noon to 4 PM.

Spoke with Ken Lee of Buntings by radiophone this morning and learned that the Kedeluma, due to leave Samarai at 10 A.M. to pick us up at Wakaiuna, has engine trouble and should arrive tonight or in the morning. Everything is packed, and all but our beds swaga, and cook gear, is in a house on the beach in readiness for loading. Boys have their fly down and are sleeping in the sawmill.

I estimated 600 plant numbers for the island; have 562 (including 60 cellular crypograms), 2970 haebarium sheets of specimens. Total mammal species specimens 192 not counting embryos) of 16 species. This was not too bad. A depauperate flora and fauna was expected.

Sunday May 20: The "kedeluma" arrived early in the morning and by 9:40 we had everything aboard and left Waikaiuna. Calm sea. Arrived at Mapamoiwa. Fergusson Island about 4:30 PM. Stayed the night there as guests of European Medical Assistant Bill Crosbie. Bert Clausen, government carpenter of Samarai, also there, repairing the doctor's house which, built about three years ago, is in bad shape with white ants. Only 40 patients in the extensive native hospital; no serious cases.

Made a number of photos showing the position of our Mt. Pabinama on Normanby, and of the neighborhood of Cape Mourilyan (Kikuyu Coast) and Mapamoiwa on Fergusson.

A small bat and a Petaurus shot at Mapamoiwa, the latter from a tall coconut palm.

A big mail for us on the Kedeluma brought the galley proof of my report on the 1953 expedition to Papua.

Monday May 21: Left Mapamoiwa about 6:15 and dropped anchor in the foot of Seymour Bay about two hours later. Ran aground on a coral reef soon after we rounded the corner from Mapamoiwa; poor seamanship on part of native skipper who was going at full speed with the sun in his eyes. Lionel and I went ashore immediately to inspect the hinterland. Landed at the landing place for Iamclele No. 1 of the 1-mile map. Walked by good govt. track over flat, forested country for 30 minutes to govt. resthouse, two or three hundred yards past the Methodist Mission village and church of Mabeia. Resthouse newly built (ADO Rutledge of Esaala (sic) would ~~have~~ appear to have sent word of our coming) in a small clearing in tall secondary rain forest on the bank of sandy, shallow Awagula Creek. Clearing attractively planted with red Hibiscus and Poinsettia, frangipanni, crotons, etc., also some young pineapple, a lime tree, and a supply of tall coconut palms.

From Iamclele resthouse we walked an hour (about three miles) approximately SW to Pagululu Village. This place was recommended as a base camp by Rutledge. Most depressing place of about six houses and a resthouse under construction (to be finished next Friday, the day on which natives are supposed to work for government on roads and road-houses.) Village overrun with more very big fat pigs than I remember seeing in any other small village; surroundings of the resthouse strewn with their droppings. A dank







hole in tall forest of the sandy alluvial flats of a creek of muddy water (said to have been fouled recently by a landslide somewhere in the mountains). Forest of neighboring foothills appeared to be all secondary. No place for us. Walai Ck. at Fagululu.

Most of the track to Fagululu passed through the southern part of the thermal area of Seymour Bay. A series of three small flat valleys, rising in smoking rocky low hills to the south, and separated by Melaleuca sananna -forest ridges. The central part of the first flat contained an area of several acres raised in small cones of mather, cracked blisters, of yellow sulphur. Pur guide pointed out a small hole where someone recent had put a foot through the surface. Ground reverberated under our tread; a murmuring and low rumbling sound down underneath. Sulphur said to have been here pre-war for use at the Misima goldmines. The next two valleys held boiling mud springs and bubbling pools. In a narrow hollow in the ridges just past the first flat was a little lake of greenish water said to be salty. In the biggest mud spring seen the gray, boiling mass plopped about a foot above the surface. A woman is said to have committed suicide by jumping into this cauldron. A strong smell of sulphur vapor in all the thermal area. Much obsidian on some of the ridges.

From Fagululu I sent a note to Rus to have the boys start unloading our cargo from the Kedeluma. Iamelele #1 is a good camp site, but offers both rain forest and savanna forest for trapping and hunting, but is unattractive botanically. Far from satisfied with it, I thought it wise to examine an alternative locality. This was Iewata Barracks, near Magegia village, on the NW part of the bay. Stopped the unloading and proceeded there in the boat. A walk ~~along the shore~~ along the govt. track which encircles the bay showed better rain forest than at Iamelele, but a swampy coast on which the dilapidated and leaky resthouse and police barracks; the locality too distant from approaches to the mountains. There was nothing for it but Iamelele. The local village policeman had sent out messengers to the seven communities in his charge, and sounded the kipi (conch shell) to summon the people from their gardens. By about 5:50 all our belongings were at the resthouse; women and small boys taking part in the transport, and all seeming to be happy about the outing and the chance to view strangers (we were soon known as Americans), Adult carriers paid 4 sticks of tobacco small boys 1 stick. All carriers made at least two or three trips from beach to resthouse.

Tuesday May 22: Hot day with little breeze in our confined clearing. SE cloud drift; A few scuds of rain in early afternoon. Thought I heard distant thunder twice as I lay awake before daylight. Think now it was ground rumbles of the thermal region.

All boys rugging camp: a work fly and tables, two small-houses, cook' shack. Have much of the bulk cargo stored on logs under the resthouse.

Walked up the govt. track perhaps 3/4 mile to where it crossed our waterplace creek. Tall second growth rain forest. Creek wide and bouldery there and shows evidence of recent violent flooding (the tail end of a cyclone struck neighboring Goodenough Island about 10 weeks ago and reportedly washed out many native gardens, and all the SE coast of the mainland had heavy weather). A trickle of warm water in a small feeder stream 1/4 mile from camp. The creek water makes dark colored tea but does not taste of sulphur; have not detected any smell of the fumaroles in camp.

A messenger arrived Mapamoiwa with a package of living small bats from Crosby; package yet to be opened. The bats, and two Petaurus now caged by Crosby, taken from holes in a dead coconut tree at Crosby's house.

Some shots fired at bats in camp by Rus last evening; no results. Traps put out this afternoon.

Wed. May 23: Hot; a threat of rain in early afternoon. A westerly change of breeze brought a strong smell of sulphur fumes into camp in afternoon



[illegible][illegible][illegible][illegible]

11. All four weapons shown above were 12 and 14 inch, cast steel, barreled, breech loaded, and fired by hand. The 14 inch barrel was the most common of the caliber 3.5 inch in bore which the Japanese used.

[illegible]

A notebook and two letters with a "letter or five" were found in the package yet to be opened. The date and two remaining items were found in the same box.

None more than at home in camp by the last evening. No more than at home in camp by the last evening. No more than at home in camp by the last evening.



Walked half an hour inland along govt track to Maiyavillage, where the track forks, one branch going towards Saibutu, the other towards Iamelele No. 2. Talked with a village elder who told me the country in the direction of Iamelele 2 was all "bush" (rain forest, and so I found it in the distance I travelled — about a mile. Tall secondary rain forest with one or two grassy patches marking the sites of recent gardens. One small patch of sago swamp; very tall, smooth trees; sago had been made there in the wet season.

The old man informed me that there was "lei" or grass country in the direction of Saibutu, and that the only good bush was under the mountains. Will probably explore that way tomorrow. A Mucuna with big green flowers (like an uncollected species on Normanby), lianes of the Apocynaceae and Leguminosae, and a couple or three common ground ferns were the best of today's collecting.

Saibutu, so pronounced by men of the village who visited camp this afternoon, was the base of Shaw Mayer (in the 1930's), who called it on his labels "Thibutu, Paralulu District". It is in Awabula District. Tai  
mission

Lionel discovered in the village this afternoon a boy of eight or ten who, about a week ago, fell into some hot part of the thermal area. His left leg badly burned or scalded and a mass of rotten flesh. Poor little fellow lying on a crude pata-pata, his leg flexed, and his whole body a-tremble with pain or nerves, when I saw him. Will send word to Mapawoiwa tomorrow; start the boy in that direction on a litter, and suggest that Crosby send one of his trained men to meet the case.

One of the bats sent by Crosby yesterday was a Tadarida, at least a small free-tailed bat, and apparently the first record for east of the mainland. A big day for Rus. Four cuscus and four Petaurus shot last night, plus a reddish small bandicoot. A fair-sized, rather bristly reddish rat in traps (Rattus). Red coloration of the rat and bandicoot is perhaps a stain ~~from~~ of some kind; the soil here, however, is gray and sandy.

#### Iamelele #2 — Saibutu

Thursday May 24: Thunderclouds up the valley in middle of afternoon and a sprinkle of rain in camp.

Visited Saibutu (Taibutu of the 1-mile map) village, leaving camp at 7:50, reaching Saibutu in 1½ hours actual walking, and returning to camp at 3:30. Passed through Naiya village (12 houses), Ubulua-a-1 (5 houses), skirted Awudanidami where a road to Iamelele #2 branched off, Nuokoka (3 houses). Saibutu itself had 10 ~~houses~~ small houses and a big new church, Malamodau hamlet, on the steep high bank of the Awabula stream, 3 houses. The position of two or three hamlets could be seen higher on the steep slopes. (See small notebook for route.) Only Malamodau (with a difference in spelling) appears on the 1-mile map. This map very inaccurate. It gives the altitude of Saibutu as 200-300 ft.; actual elevation must be at least twice that. A gradual climb for ~~about~~ <sup>an</sup> hour after one passes Naiya. A 200-300 ft. hill immediately to the north of our resthouse is not on this map at all.

an avenue of

A good resthouse at Saibutu. Road from here to there lined nearly all the way with tall ~~coconut~~ palm trees, planted most likely under government orders. They bring danger to the traveler from falling nuts, but provide the people with food and a surplus of nuts with which some copra is made. Saibutu Malamodau both had rough platforms from which rose three slanting stone monoliths; the structures called tuamaka (or a name like that) on Goodenough Island. Photographed the Malamodau examples, which were good.

Talked with the mission teacher, a most unimpressive runt from Bwaidoga (Mud Bay), covered with sipoma, who lives at Iamelele #1 and visits this place. He had been to the Mailolo mountain villages on two occasions. Road from Saibutu good, he said, but the journey takes nine hours. A local native reported the road as bad, only about a foot wide,







A patrol officer in recent years walked from Mailolo to Saibutu in 4½ hours. Most reports are that the road is bad. From Malamodau it crosses the very rocky Awabula and climbs steeply to a hamlet on the crest of a leading spur which, from Seymour Bay, does not look too difficult.

I thought that as Shaw Mayer based at Saibutu in 1939 (?) it might be a good spot for us for a foothills camp, but not a remnant of the original forest remains between here and the lowlands or for at least 500 feet up the very steep slopes of the mountains. Grasslands occupy the Saibutu valley according to the 1-mile map, but no grass was seen. A patch of secondary grass, with Albizzia procera, between Naiya and Ubulua-a-i. The only primary forest I have come across in Seymour Bay is in the half-swamp belt between Iamelele-I and the coast, and along the floodbanks of the creek at Pagululu.

Met on the road to Saibutu a group of about ten men and women en route to Mapamoiva for nipoma treatment; the women carrying loads of food in kitbags on their heads. The day we landed we met the whole population of Mailolo, and a young girl, bound on a similar mission. The Mailolo men numbered five and included a councillor.

A number of fair-sized flakes of mica lying about Saibutu resthouse. Was informed that a white man named "Dimmie" (Jimmie Bird, according to Lionel) had done some digging and built a home in the mountains, then gone to Samarai. Lionel informs me that the mica venture was a failure. MacGregore, in one of the old annual reports, relates that the men of the west shores of Hughes Bay carried in their armpit bags flakes of mica which were used as looking glasses.

Learned upon return to camp that the Iamelele villagers refused to carry the sick boy to Mapamoiva for medical treatment. Lionel therefore sent a report on the matter to Crosby.

Friday May 25: More thunder up the valley (and more sulphur smell from the thermal area). Considerable cloudiness; slight showers in the afternoon. This appears to be normal southeast weather for this area.

Morning spent in preparation of the 20-odd plant members collected yesterday. Nothing exciting. Best thing probably a small Ophioglossum from a mossy path. The second growths are made up the usual rain forest genera, but here the species seem largely different from those of Normanby, or the mainland, for that matter. I did not see much of the rain forest second growth on the lowlands of Goodenough Island.

Collected near camp in afternoon. All second elements except a Polygomm and a Ceratophyllum from a muddy cut off-bend in the forest.

yesterday was another big day for mammals: today I think 6 or 7 specimens were on the table, including Nyctimene shot by Rus last night. The genera from this camp now number 10 (same with species): Phalanger, Petaurus, Echymipera, Rattus, Pogonomys, Pteropus, Dobsonia, Pipistrellus and Tadarida. Our records show that 15 species have been collected by others on the island, including 3 probably Pogonomys.

Lionel left after lunch for Saibutu with his boy Tinker and five carriers on the first stage of a reconnaissance of the Mailolo road. This is a critical time for us. The mountains are. Fergusson are the most difficult by far on our itinerary. Approaches must be bad, or more biological work would have been done in the high country. I doubt if any biologist has been above two or three thousand feet on the island.

Today's news on the thermal cruelty is that, under dire threats from Lionel, the boy was carried to Mapamoiva yesterday.

Sat. May 26: Some cloud but no rain.

Spent the morning in the thermal area close to the SE of camp. Photographed sulphur blows, boiling springs, fumaroles. Nothing spectacular, but there should be some interesting colour







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interesting color. Collected samples of sulphur and a whitish deposit which someone who visited the general area described as alum. Gathered about 15 plant species in the Melaleuca savanna-forest and open flats of the thermal area. The ecological and floristic aspects are depauperate Australian. The local and the Goodenough name for the hot places is "mora" (pronounced morna). My boys seemed even more wary of them than I was. Saw a fair-sized dragonfly mating and the female laying its eggs at a saline lake of some acres in area. (duck feathers found on the muddy shore). A small gray dragonfly, quite strange to me, flew too low over the little water left that was left in a bubbling pond for me to net. I seldom become thirsty in the field. This morning, after 3-4 hours exposure to sulphur fumes, I was glad to return to the ~~water~~ waterbag hanging under the thatched porch of the resthouse.

The native gardens are in anything but full production here, but yesterday and today we have bought a fair amount of fresh foods: pumpkins, sweet potatoes (very big and very good white ones) a bunch of bananas, marble-sized red tomatoes (which Rus tells me are in vogue around New York Gnetum gnemon greens, and today some eggs. The day we landed we bought a flathead from a native fisherman.

A Pteropus and a Petaurus shot last night by Rus. Four Pogonomys out from a tree today by the boys.

Started last night to correct galley of my 1953 general report.

Sunday May 27: Steady light rain for half an hour or so between 4 and 5 AM.: slight drizzle as usual in the afternoon.

Examined that the 1-mile map calls the Sulphur Lake, about  $\frac{1}{2}$  to  $\frac{3}{4}$  mile east of camp. The natives call it Aboma. Area of quite a few acres (perhaps 20-30 or more) of still green water deeply embayed between savanna ridges rising 100-200 feet above it. The green of paint rather than of water (did not have anything in which to take a sample); apparently deep. At the end of the southernmost bay the water was gray, steam rose from it, and from a distance there seemed to be movement, as of simmering or boiling. Swimming ducks, several of them, encircled the gray water, stretching their wings at times as if enjoying the warmth.

Had as guide to the lake a village man whose legs were greatly enlarged with advanced elephantiasis, the lower parts warty. Followed govt. track about  $\frac{1}{3}$  of way to beach, then a very faint ~~xxx~~ trail through half-swampy tall rainforest ending in sage swamp and finally a belt of floating fern (Stonochlaena) in water too deep for sago. Sank through the fern over my boottops, and no bottom in one place.

Three or four of the common cuscus and Petaurus shot last night; a reddish rat and a gray mouse in traps. The latter perhaps a house mouse.

Lionel returned about 1 o'clock from his examination of the mountain road to Mailolo. No bloody good he reports, with emphasis. Track up the loading spur from Saibutu skirts rock walls in places and is impassible for carriers with box loads and dangerous for the unencumbered; only a few inches wide in places. Camped at 950 m by our aneroid, which read low on Normanby. Went to 1000 m or more. Country there very rough; water distant. His camp was visited early this morning by a Mailolo man who traveled most of the way by the light of a hurricane lamp.

On Tuesday Lionel will start out for Salakadi, in the interior valley, from where a track, which has been traveled by a medical patrol with box loads, reached 4000 ft. or more in crossing the mountains to the Morima coast. These are the mountains on which, from off the Morima coast the other day, we saw Araucaria trees growing.

For two days relatives of our Morima boys have been in camp. Today the party, which slept at Fagululu en route, included Lik-lik's wife (covered with Sipoma). Isulele's sister, and Niko, a boy who was with us last trip and happens to be an uncle of Isulele.







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Monday May 28: Still mild SE weather. Sharp shower between noon and 1 o'clock.

Botanized the thermal area along the Fagululu track almost to the village. Few plants. The flora of the Melaleuca savanna/savanna-forest of the ridges and flats is extremely poor—not nearly as rich as the savanna forest seen briefly at Rapamoiwa in November 1953. Made about 30 photos (color) of fumaroles and hot springs.

The local people apparently regard the thermal area with superstitious fear, although they have lived very close to it for a very long time. This morning, with the idea of attracting wallaby to green fresh food, I lit the grass in two places. Most of the grass too green to burn, so the fires could not have been extensive. However, the local village policeman came to camp during the afternoon with a story that my fires had started things in the thermal area. The sulphur flat was smoking hugely and hot water flowing all over the place. As it happened, I had sent my boys out to search for additional material of a pitcher-plant (*Nepenthe*) collected this morning. They returned when the VC was in the middle of his story. One of my fires had burnt a ridge; everything in the thermal area quite normal, they reported. to which the VC asserted that the rain about noon must have quieted the underground fires.

Nothing in traps last night; no jacking or bat shooting. Rus has a cold.

Six carriers arrived from Saibutu to take Lionel to the mountains tomorrow. They and their women brought a good quantity of taro, sweet potatoes and yams to sell.

Tuesday May 29: Less cloud today; no rain.

Worked up the creek near the camp  $\frac{1}{2}$  for a good bag of second growth rain forest plants including 3 spp. of *Macaranga*, a rather common big tree-fern (*Cyathea*) and a tree of the Compositae.

Three *Pipistrellus*, 1 *Dobsonia* and a cuscus shot last night. Nothing in traps, which have been shifted today.

Rus this AM walked to Saibutu this morning and back to view the country. Lionel left camp at about 7:30 AM on the first stage of his second journey to the mountains. Has 6 carriers and the VC from Saibutu, who will do the whole trip.

Several days ago, at the insistence of the local VC, I sent the cook to shoot a very big domestic pig which had lately gone bush and looked like a total loss of valuable property. Kim put three loads of BB into, or at it. This morning Lionel had a try with a 38 Colt revolver. Three shots put into the pig's head, according to the VC who brought the revolver back to camp, but it is still alive and on the loose.

Wed. May 30: SE weather continues. Heavy rain for perhaps 15 minutes just before noon; heaviest and most ~~rainy~~ rain since we have been here.

Botanized on coast. Big bag but all run of the mill species which have to be included in the collection. *Ipomoea pes-caprae*/*Caravalia ensifolia* community on sandy beaches, which occupied practically all the shore. Mangrove forest (*Bruguiera*/*Avicennia*) on creeks. The only mangrove collectable was *Aegiceras*.

Nothing in traps. A cuscus, a *Dobsonia* and an *Echymipera* shot by the boys last night. Rus too chafed from yesterday's walk to go out.

At last succeeded in capturing one of the big dusk-flying dragonflies of these islands (the same thing, apparently, as at Maikailuna). Flying here at the same time was a much smaller species which I had not noticed before. This place is even poorer in insects than Normanby. No doubt it is the off season. Here the big Ulysses and birds' wing butterflies are more common and come more frequently in the nets. I have started carrying a net



Monday May 28: Still cold. The weather is very dry. The morning is very clear.

Visited the forest area along the mountain trail about 10 miles from the camp. The forest is very dense and the trees are very tall. The ground is very dry and the leaves are very brown.

The local people are very poor and live in small huts. They are very friendly and hospitable. They are very poor and live in small huts. They are very friendly and hospitable. They are very poor and live in small huts. They are very friendly and hospitable.

Nothing in the forest except a few small trees and a few small animals.

Six people arrived from the forest. They are very poor and live in small huts. They are very friendly and hospitable. They are very poor and live in small huts. They are very friendly and hospitable.

Thursday May 30: Very cold. The weather is very dry. The morning is very clear.

Worked in the forest. The forest is very dense and the trees are very tall. The ground is very dry and the leaves are very brown. The forest is very dense and the trees are very tall. The ground is very dry and the leaves are very brown.

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on my morning excursions. The boys I have tried are not as good as they might be.

Thursday May 31: Completely overcast except for brief spells of sun in afternoons. No rain.

Worked up the slopes of a 500-700 ft. (Lionel has the map with him) hill to the S of camp to examine its capping of what, from a distance, looks like primary rain forest. All second growths of a poor development of recent rubbly volcanic soil. A new sweet-potato garden at the edge of the forest being fenced by two young men of Iamelele. A grass fire I lit a few days ago went almost to the top of the hill and scorched the edge of the forest. The burnt country should attract wallaby if any occur in the area.

Rus, walking to Fagululu, took a wrong road and ended up in seeing several hamlets of the village group. Only addition to mammal collection was one *Nyctimene* shot by Rus. New trap sets tonight.

Was eating when the councillor of Naiya village brought in two rat traps. Said they had been stolen and that other traps were in possession of villagers who presently were away at their gardens. Gave the old man a stick of tobacco, feeling that he might have been up to a cunning dodge to get just that. It develops that two of the boys lost traps and said nothing about it, and that Rus himself lost two.

Friday June 1: Heavy rain from mid-morning to mid-afternoon; from NE. Most rain in a day since we started field work nearly two months ago.

Botanizing up the creek for the usual poor collecting in the prevailing second growth forest; I sheltered from the rain for about an hour before deciding to get thoroughly wet instead of half wet, and returned to camp before the creek had risen more than a few inches.

Lionel returned from the mountains shortly before lunch. Trip successful. He has found a camp site on a track crossing the mountains from Agamoia to Ailuluai on the south coast. The camp site position is given as almost 4000 ft. on the 1-mile map. Lionel, however, could make it only 650 m (ca. 2800 feet) by aneroid. The aneroid was found to differ widely from the Forest Department instrument on Normanby and no doubt is far out. Would still like an altitude over 4000 ft., but we will have to be satisfied with it. The vegetation would appear to be mossy forest, tall at camp, stunted on the rain crest not far above camp. An *Araucaria* (we saw the trees from Kedeluma on the way here) in the forest at camp level and below.

Propose to start Monday on the 2-day walk to the mountain camp (the range is called Debenelagi) and stay there two weeks. The track into the mountains proper turns south from Agamoia, from which camp should be reached in 3½-4 hours. From Iamelele #1 to Agamoia, ~~from~~ via Fagululu and Niubuwo, is a journey of 6½-7 hours. From near Fagululu the road goes up and down and reaches an altitude of about 600 feet in one place. Lionel collected an oak between Niubumo and Agamoia at about 600 feet. Also brought back a *Eurya* and what looks like an *Ilex*, plus a couple of orchids, from near the mountain camp, and branchlets and seedlings of the *Araucaria*. Had the seedlings planted in time and will try to get them back to Samairai.

Following Lionel from a village on Lake Lavu was ~~my~~ a native with a live crocodile about three feet in length. Looked like the salt water species of these parts. Asked two pounds for the specimen, which was far too much.

Three more stolen rat traps brought in today. Rus, jacking before dawn for a change, shot a *Pteropus*. Nothing in traps. The event in mammals for the day was a wallaby shot last night at Agamoia by Lionel and sent on this morning by fast carrier. Looks like *Protemnodon agilis*, but darker; has flank stripes (whitish) but no white marks on face or shoulders, as I seem to remember being present in *P. agilis*. A bat net rigged this evening for the first time on the trip.



to be making arrangements. The day I have tried and not so good as last night.

Thursday May 21: Completely overcast except for brief spells of sun in afternoon. No rain.

Worked on the slopes of a 500-700 ft. (1500-2000 ft.) hill to the S. of camp to examine the country of that, from a distance, looks like a very low mountain. All second growth of a poor development of recent widely volcanic soil. A new forest garden at the edge of the forest being formed by two young trees of *Janania*. A grassy hill at a distance and near the top of the hill and reached the edge of the forest. The forest country should not be called a forest.

After waiting for a while, took a group of men and went up to see the forest. The forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

After seeing the forest, the controller of the village brought in two very young birds. They were very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

Friday June 1: Heavy rain from mid-morning to mid-afternoon. No rain in the afternoon. The forest was very good. Only a few trees were seen.

Following up the trail for the forest, the forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

After returning from the mountain, the forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

Propose to start working in the 3-day walk to the mountain camp. The forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

Following along from a village on the mountain, the forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.

Three more days and three more days. The forest was very good. Only a few trees were seen. The forest was very good. Only a few trees were seen.



Sat. June 2: Overcast; very little sun; no rain. Weather seems to be northerly.

Most of day spent on completing correction of 1953 MS. Drying materials on hand.

Nothing in traps; nothing in the bat ~~nest~~ net. Lionet shot with .22 dust a fine big dragonfly new to the collection -- awing in dusk.

A native brought in this afternoon, from a hole in a coconut palm, a pretty brown Rhinolophus? new to the collection.

More visitors from Kalo Kalo this afternoon -- Galawina's family. Until earlier this afternoon (since Thursday) we have had the wife of the No 2 cook and the mother of Sipoma, also from Kalo Kalo. These women and a male escort waited this afternoon for the boys to get their weekly issue of tobacco and canned meat before starting back for their village.



Sept. 1944 (overcast) very little wind; no rain; weather seems to be normal.

Nov. 1 day spent on our first expedition of 1944. Very successful on many.

Nothing in particular to report. Almost all with 28 and 30. The day was very hot to the collection -- being in 1944.

A native brought in this afternoon, from a hole in a coconut palm a grey brown. Unidentified new to the collection.

Two visitors from Kalo this afternoon -- Olathe's family. Olathe's sister, this afternoon (since January) we have had the wife of the 1st son and the mother of Olathe, also from Kalo. These were in and a male about 1944. The afternoon for the boys to get their weekly lesson of 10000 and 10000 were below standing well for Kalo village.

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Sunday, June 3: Overcast morning; heavy rain most of afternoon, ceasing toward dark.

An unpromising outlook for our transport move in the morning. This is the fourth day of bad weather in a row. Everything but our swag and the cook's box and pots and pans is packed tonight. Including 150 lbs of rice for the road there will be 47 carrier loads, 37 of which will be going on from Agamoia.

Lionel leaves early in the morning for Mapamoia and I will take over the transport man's duties. Today Rus finds himself practically out of flashlight batteries (only 10 new ones on hand for four weeks of field work remaining to be done on the island). Here at Iamelele we are in a radio reception blank spot for the Samarai transmitting station. We have no information for boats or planes. Therefore if the mammal department is to function, Lionel must do the 6-hour walk to Mapamoia, get on the radiophone to Samarai, then walk down the south coast 6-7 hours to Ailulua and from there climb the mountains to our proposed camp. If next week is fortnightly plane week for Esa'ala, the batteries can be flown there Tuesday and we can send a messenger (3-4 days and a ferry trip across Dawson Strait) for them. There might be a boat coming in this direction. Tomorrow will tell. Mails will go out to Mapamoia in the morning, my corrected galley included.

Monday June 4: Rus and I left Iamelele at 9:15 AM with 36 carriers, arrived AGAMETWA 1:10 PM. A very hard walk. Fortunately the weather held fine. Had to leave 11 loads at Iamelele. Shortage of carriers. Carriers were from Saibutu (9) and Iamelele #1 and #2. VC from Saibutu & Iamelele #2. The Saibutu Councillor who went with Lionel to Mailolo track and also on his exploration of last week.

Reached Fagululu 10:10; very hot over the thermal area followed alluvial flats through tall forest; were carried ~~over~~ across 3-4 small streams still running strongly from yesterday's rain; track muddy, under water in some places. In 20-30 minutes from Fagululu entered fine tall forest on rising ground; many <sup>great</sup> clean dipterocarps; ground stony as at WAIKAIUNA.

At 11:25 rested at the hill stream soon after passing an area of Imperata and Melaleuca savanna. First hard going followed this. At 12:25 came to the crest of a narrow ridge at a place where old coconut palms marked the site of a former village, fine view of Lake Lavu and the Amphlettas off the North coast (photos); boys climbed for drinking water - very welcome; altitude 200 m. The lake shown on the 1-mile map is actually an island in the lake. Small islands of grassy vegetation afloat in the lake; edges marshy.

Reached NIUBULA 2:05 lunch stop to 3 (many carriers did not arrive until nearly 3 o'clock); perhaps half dozen houses, good rest house and barracks; 270 m. and the high point on road.

Left NIUBULA 3:05 Hamlet of LEGAMAGAMA, 3-4 abandoned houses, 680 m. 3:40. Most of the distance through very steep narrow ridges; much oak in tall primary forest much obsidian.

Dropped down <sup>through</sup> the primary forest to LILAI Creek, 160 m., at 3:55. hamlet on low eastern bank. Growing here was a young Araucaria, ca. 30 ft. high, said to have been washed down as a seedling by a flood.

AGAMCIA a village of about a dozen small houses and a dilapidated mission church (Methodist). Good rest house but small for our needs as collecting camp. Very friendly people. A VC and several councillors, also 3-4 older men that one often sees. The women were busy cooking food when we arrived and towards evening brought 22 earthen pots of taro and several potatoes: paid the government price asked, stick per pot. Enough food for our 36 carriers, & "company" boys and hangers on for supper and breakfast. Alt. 210 m. Sent Tinker to shoot a wallaby for the carriers: saw three, got none.

This AM at 6:45 Lionel, with GALUWINA carrying a light swag, left for Mapamoia.



Section 3. General provisions of the law of the State of New York.

It is the policy of the State of New York to encourage the development of the State's natural resources and to protect the State's environment.

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39

Tuesday June 5: Only 6 of our 37 carriers of yesterday are willing to go on to the mountain camp despite an arrangement with Lionel that they would do the whole trip. I discovered this last night, fell in the carriers and talked through Kim. No good. Therefore asked and was promised 25 carriers by the Agamoia V.C.. People want the p a day.

Local carriers late in turning up and it was 7:30 before I got away with 25 loads (6 of them women): the 6 remaining Saibutu. Those local councillors carried full loads; Saibutu councillor with us.

Road followed the Agamoia spur ridges up a little way then dropped through primary rain forest to cross the LAILA at 7.20 m. (Agamoia 170 m. this AM). BUDAGAPATUGONA hamlet on far bank. WA-IU hamlet of 3 houses 8.:30. Mostly steep climbing from there on, with sharp~~ed~~-tipped OIBWAGA (fide Saibutu councillor) across the Lilai on left.

At 10:30 reached alt. 700 m. where the trail left the crest of the spur<sup>we</sup> had been following big Araucaria trees in oak forest here (oaks for ca. last 100 m.). Very steep slopes descended on a very narrow winding track to a very small stream at 680 m. Reached stream 11:00, ahead of carriers. Lunch stop for 2 hours. Last water. Camp supply. Light showers as we rested.

Camp at 780 m. reached at 1:20 after a very steep 25 minute climb from stream. Good ground. Oaks predominate and conspicuous by brown under surface of their leaves, in wet looking forest 50-100 ft. high. Camp on a nice bench about 50 ft. below crest of the main Agamoia-Morima divide.

Paid off the local carriers at their request - I saved thereby 50 lbs. rice. They left for their villages about mid-afternoon. (Besides the three councillors the NIUBULA policemen carried loads). The two flies and my tent rigged before dusk and the boys finished making their sleeping platforms well above the ground.

Our drum of kerosene is somewhere between here and Iamelele. Borrowed a very small hurricane lamp (German)  $\frac{1}{2}$  from one of the Saibutu carriers to eat by, I was in bed by 7 o'clock. The last two days have been strenuous.

Wed. June 6: Heavy rain with thunder, through much of the night after 11 o'clock.

Rain on and off with rather strong wind all day, hampering the work of rigging camp.

Paid the Saibutu carriers and gave IL councillor a present of  $\frac{1}{2}$  l after breakfast & they disappeared over the crest of the divide on a visit to the Morima coast.

Broke off supervision of camp construction to examine the divide above us. Camp altitude when I left was 775 m. but anuroid, Lionel's night camp on the crest, a bit to the west 800 m. A saddle in the divide to the south, under a peak much higher & bigger than our slight eminence, 750 m. In the gap the natives have cut a fly-way which they net for pigeons. A rattan cane stretched across the fly-way has small bunches of dried grass attached to it. Watching the natives shake the rattan, the attention of the pigeons is caught as they fly over and they go into the net.

Several carriers arrived at 9:50 and at 11 o'clock Rus arrived from Agamoia; had 10 carriers and three spare councillors; journey of 4 hours. Carried by 13 Iamelele men the 11 loads I left at Iamelele on Monday reached Agamoia about 2 PM yesterday, too late for Rus to come on.

Nothing in 30 traps put out late yesterday.

A whirring of many cicadas ("6 o'clock crickets"?) at 8 min. to 6 PM.

Thursday June 7: Rainy and squally most of last night. Keen wind from NE in forenoon; high overcast and little sun all day; some mist in treetips late



1. The first of these is the fact that the Government has not been able to secure the necessary funds to carry out its programme. This is due to the fact that the Government has not been able to secure the necessary funds to carry out its programme. This is due to the fact that the Government has not been able to secure the necessary funds to carry out its programme. This is due to the fact that the Government has not been able to secure the necessary funds to carry out its programme.

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1. The first part of the report is a general introduction to the project, which includes a statement of the purpose and objectives of the study, a description of the study area, and a brief review of the literature on the subject.

1. The first of these is the fact that the majority of the population of the United States is of European descent. This is a fact which has been recognized by the government and the people of the United States for many years. It is a fact which has been recognized by the government and the people of the United States for many years.

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This is a Billings document and hence it contains a number of references to the Billings family.

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to the fact that the Government of the United States has been unable to obtain the necessary information from the Government of the United Kingdom to enable it to take the necessary steps to prevent the export of arms and munitions to the Government of the United States.

Nothing in 30 years till 1910-1911.

1. The first part of the report is a general introduction to the subject of the study, which is the effect of the new tax law on the economy of the country.



34

afternoon; no rain to nightfall.

Lionel arrived from Mapamoiwa about 10 AM, having slept at UKEC KEO (UKAIOKAIO OF It of 2-mile map) on the Morima coast. Had the village constable & a councillor with him, also WALIA, who was Rand's head boy on the Fly River in 1936-37. Heard I was here and came up to see me. Lionel walked up in about 3 hours. Good track, he says, & moderate slopes.

The threatening weather in early morning kept me close to camp. Collected on the immediate crest over 30 numbers. Mostly basic species, but a nice ~~anuroid~~ Off the sub-slope, a Cyathea, and at least six orchids including a brilliant orange and yellow Dendrobium of which I made close-up color photos. Forest of crest, as of the upper slopes, dominated by an oak made conspicuous by brown under-leaf surfaces. Tall Araucarias prominent on crests of main slopes and lateral spurs.

Nothing in 125 traps out last night. No jacking.

At daylight this morning, and yesterday too, heard the beat of drums down the slopes to ca. north. No cicada sounds this AM.

Camp construction complete, this afternoon had spare boys begin cutting forest to open a view and let the afternoon into camp. Already we can see Lake Labu and the coast of Hughes Bay.

Friday June 8: Fine day until 3 PM when mist settled down at camp level and lasted until after dark. A few sprinkles with the mist; patches of blue sky sometimes showed through it above.

Cicadas began to sound at 5:55 PM; no sound from them this morning. They do not begin their evening chorus with an extra loud, shrill note, as on the mainland.

Lionel cut a direct track to the top of the first & second peaks in the east; he did not carry the anuroid. I followed an old, very bad native track which sidles around the N side of the first peak. In rain forest; nothing of great interest. Track very narrow with steep fall, & made dangerous by slippery tree roots. I had one fall. One young gray rat (Rattus) in traps last night; four Pogonomys cut from a tree today. 175 traps out tonight, including a steel set with meat here in camp, and two rat traps set on trees in camp.

Three women and 3-4 small boys & girls stopped an hour or two en route FAIYANA on the ~~morima~~ Morima Coast to AGAMOIA. Unusual to see women travelling without escort. A man and his son & a dog, sans spear, came up from the Morima coast this AM to satisfy his curiosity about us, and went back after a meal of rice.

Sat. June 9: In mist clouds almost continuously from ca 8-40'clock. Heavy rain 1-1:30 PM. Thunder this evening (thunder every night since we have been here. Wind c. SE.

Botanized eastward along the coastline ca.  $1\frac{1}{4}$ - $1\frac{1}{2}$  miles, by a new track cut by Lionel yesterday. Highest elevation 850 m. by anuroid which must be wrong. We will have to see the marine charts for altitudes hereabouts. The 1-mile map is quite unreliable for anything. A Dicsonia probably the most important plant collected, Several more orchids. Two spp. Nepenthes.

Lionel cut further along the ridge west in the clouds, reaching 900 m. by anuroid.

Another young gray rat in ca. 175 traps out. Seven Pogonomys cut from one tree by the boys. Three boys jacked for nothing last night; Rus for a while before dawn, shot at two bats. A comparison of Pogonomys total-length maximum by Rus shows the Normanby animals to be much bigger than those of this island; the mountain forms bigger



disturbance; no rain in vicinity.

Several minutes later, a small boat was seen at the mouth of the river. It was a small boat, and it was seen at the mouth of the river. It was a small boat, and it was seen at the mouth of the river. It was a small boat, and it was seen at the mouth of the river.

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than the lowland on both islands.

Photographed soon after sunrise the newly opened view to N; Araucarias against the morning light. Clearing finished this afternoon; a grand view of the island from Mt. Maybole to the NW to Mt. Kilkerran its N slopes to the NE.

Some Morima people brought coconuts, limes, and a few taro, taitu, & sweet potatoes to sell for tobacco. Those men with dogs came to inquire into the matter of hunting for us. Not ready to start on Sunday. We offer 10/- for the black wallaby (Dorcopsis) which is still to be found sometimes on small streams in the mountains, 5/- (for cuscus and bandicoots, 10/- for the first Dactylopsila).

A fresh supply of batteries from Samarai, expected today, did not arrive. By arrangement by Lionel over the radiophone from Mapamoiwa, the "Kedeluma" was supposed to have dropped them at ALLULUAI yesterday. The Morima people today said the boat had not arrived. Jacking now being done on HING WAH "five Rams" batteries made in Hong Kong, bought at 1/- each by Lionel from Gribben's trade store at Mopamoiwa. This will be about the last effective night.

Among today's plants was a fruiting specimen of an epiphytic small-tree Rhododendron, past flowering, but with fruits 17.5 to 19 in. long in length. Will save seed if they seem mature enough. Another epiphytic small-tree Rhododendron grew beside the first, past flowering. On the highest spur crest grew a Xanthomy tree or Dicaspeopum with small, pointed leaves — a "mossy forest" element, but I would apply this designation to the forest as a whole (perhaps a stunted rain forest).

Sunday, June 10: Clear, hazy dawn. Showers, some heavy, from 10 AM through rest of day. Last night was clear and starry.

Botanized perhaps 1000 feet down the HILULUAI-UKEOKEO track. Mostly good travel on the crest of a spur on which some fine Araucarias grew in oak forest. Went as far as a ferny (Gleichenia) clearing, when rain and thick mist drove me back. Half hour's walk back to camp. Two spp. of Cyathea (one of which was at 1300 m. in Geed-enough) the most interesting of ca. 20 plants collected.

Weather prevented continuation of track cutting in the high crests by Lionel, who sent word to AGAMOIA for carriers to move us down on Monday week.

Nothing in traps; no results from jacking last night. The day for mammals saved by the arrival about 1 o'clock, of a cheerful Morima man with 3 Pogonomys, cut from a tree and a young bandicoot caught by dogs. Had a young son and two dogs with him. Came and went in the rain. Will sleep in his village and come up to us when he has specimens.

Lionel has a bat net on edge of camp tonight.

Mond. June 11: Max. 23, min. 19 C. SE weather of yesterday continues. Mist in the treetops by 9AM. Rain before noon & most of the afternoon — on and off. Weather is hampering botanical field work. It brings hazy conditions which are against photos of the fine views from camp.

Collected this morning the fine Araucaria of this island. It looks like A. cunninghami but could be another species. Picked a small but old tree 30 in. tall X 72 in. trunk diameter; cones erect, about half grown; photos closeup in color. Was disappointed with the meagre variety of epiphytes on the old Araucaria: a Hydnophytum, a Myrmecodia, Lilligaea and one or two other ferns, one small white orchid and a little reddish Drosera in flower, a very few bryophytes. A gray Usnea conspicuous on other old araucarias.



There are several other points to be noted.

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There was a young lady who  
lived in a village not far from  
the city. She was very  
beautiful and had a  
very good education. She  
was very kind and  
very generous. She was  
very popular and many  
people loved her. She was  
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26

No mammals got in any way last night. A native hunter brought from somewhere down the Morima slopes (?way?) 3 brown cuscus and two small bandicoots. He and his son and two dogs are camped in a leaf shelter on the ridge crest nearby. About a dozen small boys and girls & a couple of young women from the Morima slopes in camp this morning. The bandicoot being got here is much smaller than the 2 specimens from Iamelele.

Lionel cut further along the crest and reached top of a small sharp peak 1010 m. by the faulty aneroid. Clouds prevented his seeing out. Distance from camp ~~was about 1000~~ estimated as  $2\frac{1}{2}$  miles or more.

Tuesday June 12: Max. 23, min. 19 C. Mist on and off 9:30 to dusk or slight showers, but heavy rain 6 PM — 6.45. SE continues.

Spent day in camp, after collecting a palm fairly common on the ridge crest. Resembles the coconut-like sp. of Mt. Pobinama, but not so tall; may be another species. Sent boys to collect down to the water on the Morima slopes, ca. 8-10 plants new to the collection.

Photographed a bat (MacroGLOSSUS), & two orchids ( a white terrestrial, & a small dainty Glomosa) with close-up equipment.

A big brown Rattus (2nd spp.) in trap; 2 MacroGLOSSUS in the net at dawn (Rus happened to be standing there after being out with the jacklight), 4 cuscus, a bandicoot, & 3 Petaurus brought in by natives. An excellent day. Have put a limit on cuscus which evidently are easy for a native to find with dogs. Stressing our interest in Dorcopsis & Dactylopsis. I found today a bamboo from which most likely a Dactylopsila had extracted a grub from holes gnawed in the wall of internodes.

Mammal boy ISULLE on his third consecutive day off duty with fever and sore throat. Gave him 2 sleeping pills at 1 AM to quiet his groaning; put him on a camoquin routine beginning today ( 3 pills per week).

Wed. June 13: Max. 24.5, Min. 18 C. Much rain through last night. Cloud and mist to mid-morning. Sunny after that. SE cloud drift.

Weather kept me in camp preparing plants, to 10 o'clock, then went down water-place ravine (1 half way). Collected some good things including 2 Hymenophyllaceae, a Astronidium, small Amaracarpus of the undergrowth. carpus, etc. I have far more plants on hand than I can dry out, am more than a day behind in getting specimens into the dryer.

No mammal get last night. The native hunters camped nearby brought in this afternoon a fine bandicoot, blackish on head, neck and shoulders, & 5 cuscus of various sizes. Have stopped buying cuscus.

Action taken to see what has become of the "Kedeluma" & the batteries she was supposed to have dropped at Ailuluai for us during the weekend. Tinker departed 5 AM for ~~the coast~~ with a request for Crosby to get in touch with Buntings by radiophone. Lionel went down to the coast at UKEOKEO and found that no boat had called in there or at nearby. About 10 small boys and several young girls, plus a councillor from UKEOKEO, bringing a few bananas for sale but chiefly to have a look at us.

Thursday June 14: Max. 21, Min. 26 C, Strong SE wind most of last night; air quite chilly. Little cloud; no mist today; no rain. SE continues.

Worked down to the water-place gully & for a little way along the side of the mountain on the Agamoia trail; fair bog, mostly of ferns of the ravine,, also an interesting Rubiaceae small tree with small white flowers.

No mammals added to collection except ~~a~~ a sita-sita (Petaurus) shot last night in camp by Rus. The Hunters went down the Morima slopes for bats and did not return.



1. The first of these is the fact that the majority of the population of the United States is now living in urban areas. This is a result of the process of urbanization, which has been going on since the beginning of the 20th century. The population of the United States has increased from about 100 million in 1900 to over 200 million in 1950. At the same time, the population of rural areas has decreased from about 100 million in 1900 to about 50 million in 1950. This has led to a concentration of the population in urban areas, which has had a number of important consequences. One of the most important is that it has led to a change in the way of life of the majority of the population. In rural areas, the population has traditionally been engaged in agriculture, and the way of life has been based on the rhythms of the seasons. In urban areas, the population has traditionally been engaged in industry and commerce, and the way of life has been based on the rhythms of the clock. This has led to a number of differences between the two ways of life, including differences in the amount of leisure time, the amount of social contact, and the amount of participation in community activities. These differences have led to a number of problems, including the problem of social isolation, the problem of mental health, and the problem of crime. These problems have led to a number of efforts to improve the way of life in urban areas, including efforts to create more green space, to create more social services, and to create more opportunities for participation in community activities. These efforts have had some success, but there is still a long way to go. The second of the two main reasons for the problems of urban areas is the fact that the majority of the population of the United States is now living in a very small number of large cities. This is a result of the process of centralization, which has been going on since the beginning of the 20th century. The population of the United States has increased from about 100 million in 1900 to over 200 million in 1950. At the same time, the population of small cities and towns has decreased from about 100 million in 1900 to about 50 million in 1950. This has led to a concentration of the population in a very small number of large cities, which has had a number of important consequences. One of the most important is that it has led to a change in the way of life of the majority of the population. In small cities and towns, the population has traditionally been engaged in a variety of occupations, and the way of life has been based on the rhythms of the seasons. In large cities, the population has traditionally been engaged in a few occupations, and the way of life has been based on the rhythms of the clock. This has led to a number of differences between the two ways of life, including differences in the amount of leisure time, the amount of social contact, and the amount of participation in community activities. These differences have led to a number of problems, including the problem of social isolation, the problem of mental health, and the problem of crime. These problems have led to a number of efforts to improve the way of life in large cities, including efforts to create more green space, to create more social services, and to create more opportunities for participation in community activities. These efforts have had some success, but there is still a long way to go. The third of the two main reasons for the problems of urban areas is the fact that the majority of the population of the United States is now living in a very small number of large cities. This is a result of the process of centralization, which has been going on since the beginning of the 20th century. 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Tonight the water-plake stream in being trapped for the first time. Traps were supposed to have been there from the beginning. Boys need more supervision than they have been getting.

Working a double shift on the dryer in an effort to clean up accumulated plant collections.

Friday June 15: Max. 23.5°, Min. 16° C. Clear, still night, no mist, no rain in the 24 hours. Weather SE and hazy.

Worked on specimens & sent boys down Morima slopes. They brought back only seven additions to the collection. The locality is about worked out.

A brown Melomys, in the new trap sets on the stream: A Nyctimene, geminus in one of the two bat nets set in camp. Melomys is a genus new for the island. No insectivorous bats caught so far in the few nights nets have been set on the trip. Are they alone furnished with "radar" and the fruit-eating species not so equipped?

One of the Morima hunters who have been camped nearby returned this afternoon from a visit to the coast. Brought 3 small Dobsonias from a cave on a creek near UKEOKEO? A Nyctimene & a bandicoot. No one in the leaf shelter when I passed it by this evening; hunter has perhaps gone home for good. He has brought in a nice lot of mammals for the collection & on local values, has carried a considerable amount of money for himself (he has had a companion most of the time). This man has carried 41/- so far.

Noticed in amazement this morning Iamelele eating a great plate of boiled rice after two days of illness & much groaning during two nights. It brought the remark from Lionel "When them bastards stop eating, they're crock."

Tinker walked into camp at 6:45 PM, having left Mapomoiwa at 10 AM, he says, and having walked the best part of an hour on a mountain trail by flashlight. He brought mails. But instead of the flashlight batteries we need so badly, a carton containing four bottles of rum. A general mess-up. No note from Crosby, who is being relieved by another EMH., with whom, apparently he was having a party. The new EMH was brought from Samarai by the medical vessel HEKAHA, according to Tinker. This vessel brought our cargo, the Kedeluma having broken down. Only the batteries were supposed to come on the Kedeluma (to AILULUAI? ON THE Morima coast); ½ dozen mammal plates (to replace plastic rubbish I bought in New York) & 4 bottles of rum were to be sent by the vessel due to pick us up at IAMELELE on June 27. Sent on the Hekaha were a case containing 6 dozen plates of the batteries, and a carton holding the rum. Crosby gave Tinker the rum; the batteries are still at Mopamoiwa.

Sat. June 16: Max. 23, min. 18 C. Light rain with heavy mist from dawn to about seven; misty to mid-morning; no further rain. SE weather.

Tinker having volunteered to go back to Mopamoiwa, departed about 8 AM with a letter from Lionel asking that the batteries & ½ doz. plates be extracted from the packing case and sent back to camp with him. The Hekaha is supposed to return to Samarai tomorrow & could drop Tinker at Ailuluai en route.

Botanized down the crest of a spur which an old path descends in the direction of NIUBULA. Nine additions for this last excursion for this mountain camp, mostly ferns, including the first fertile Elaphoglossum for the trip, also a small tree of the Arabiaceae.

One small gray Rattus in traps. Nothing jacked although Rus fired two shots before daylight. Kim, also out before dawn, came across something in the forest which must have been either a dog or Dorcopsis, but being a cock instead of an accomplished hunter, he had no shell ready in his gun so the beast got away.

1953 and several children up this afternoon from the Morima side to relieve our 3 Morima boys of their Saturday tobacco issue. But we are running short



[illegible]



of tobacco and the boys ~~xxx~~ were issued one stick only/apiece to give away or with which to buy betel nut. Spare boy GALUWIMA sent to Iamelele this AM to get a fresh supply of tobacco from one of our locked boxes.

Sunday June 17: Max. 23, min. 13 C. Frequent strong gusts of SE wind last night, something like Top Camp on Goodenough Id. in 1953. Light rain with mist 5:40 to ca. 7 AM. Sun & cloud ca. 50/50 after that.

Day devoted to drying collection & packing for transport to Agamola tomorrow.  
Some letters written.

A small gray Rattus in traps. Lionel and Kim packed last night for no result.

The strong south-easter will make landing difficult in the battery situation. ~~XXXXXXXXXXXXXXXXXXXXXXXXXXXX~~ on the exposed Morine coast. Another complication in the battery situation. A nice lot of orchids and ferns. Few trees in flower or fruit. The only well defined major communities are the oak forest in which we are camped and which covers the crest of the backbone ridge just above camp. On the ridge top these trees are only 30-40 ft. high and there is much moss on the trees & ground, especially in tented mounds about the bases of the bigger trees, which develop short stilted roots. The rain forest occupies the water-place ravines where an abundant testioaceour undergrowth ( ) is present. On the razorback crests of the higher parts of the backbone, to the east, the very mossy, stunted forest carries much small-leaved Xanthomystus (Descarpnerum sp. as a subsidiary tree, but there are no oaks or beaches and the forest is perhaps a mixed rain forest of sorts. Two Rhododendron spp. (in fruit only) found in the very stunted

Apparently the terrain above the oak forest is too precipitous & the ridge too narrow for occupation by either oaks or Nothofagus. I found Nothofagus on Goodenough Fergusson Islands & I hoped to find it here. One of the best things botanically is the fine Araucaria associated with the <sup>oaks</sup> on the crests of spur ridges (mostly lateral spurs) & which go down the slopes to probably 2000 feet.

Including Dobsonia from the Morima coast, & other things brought in by native hunters, there are 42 specimens of species for the camp (Rattus, 2) Pogonomys ?, Melomys, Dobsonia, MacroGLOSSUS, bandicoot, Phalanger, Petaurus.

The locality has been poor in results . There was one good swarm night for moths. Very few butterflies were taken; only one big dragonfly; a good lot of damselflies, mostly found in the forest far from water.

Frogs have turned up well. Only one skink (like a sp. in the Normanby mountains) species found. No other lizards apart from a gecko jacked at night. No snakes.

Monday June 16: Heavy rain 4 AM to around seven; rain was still falling when I left camp with my two boys to collect on the way down to AGAMOIA. Left the mountain camp 7:50, arrived Agamoia 12:10, several smart showers on the way. Heavy rain after all carriers had arrived (c. 2PM - 3). Rain from SE.

Good fortune was with us today. At 6:45 AM Tinker turned up with the 12 dozen batteries that have given so much trouble and entailed about 100 miles of travel. He had slept at UKEOKEO and a young Morima man was with him. Eight Morima men and several small boys turned up a little later to assist in the carry. With these and over 20 from the AGAMOIA villages we had more than enough (had 30 loads but sometimes they were carried by 33 people). The carriers were still arriving at Agamoia when Galuwina walked in with an 8-pound package of tobacco from IAMELELE.

Among the Morima men was INOHOB1, our cook on the Fly River Expedition, beaming all







over, but much emaciated, as if through a wasting illness. It is good to have these old boys turn up to say hello & romance with our present staff about old times.

The journey down was only about 3 hours for carriers. Footing was bad on the steeper slopes and travel worse than on the way up. I had a lot of steps cut in the pale grayish soil of the main oak forest ridge. Much of the travel through second growth rain forest on steep old garden land up to ca. 1500 ft. Collected 18 plant numbers on way down, bringing the total for the mountain trip to 247, sheets 983.

One of the Morima brought a fine Uromys, bought for 5/-, the first we have for this island.

Tuesday June 19: Cloudy day, having rain between 2 & 4 PM.

Collected on a grassland patch of up to 100 acres a short  $\frac{1}{2}$  hour walk ca. N of camp & at perhaps 400 ft altitude. Treeless ridges except for a few widely scattered Deplanchia trees (sterile). Grass burnt in patches: mostly Themeda, with a sparse sprinkling of Tulalia, Sorghum, etc. A little Emperata in places. Herbs: Primelea, Stackhousea, , Buchnera, Mitrasacm, Cassia mimosifolia, Protalaria linifolia, etc. Doubtless man induced. As seen from our mountain camp. There are several similar patches in the neighborhood. Very hot on the open ground after two weeks in the mountains.

Lionel, jacking last night, shot 2 cuscus, a sita sita, a Nyctimene: Kim a cuscua, Rus saw nothing. Lionel, getting up at 4AM, bagged a wallaby on the grassland patch I later visited. Three Pogonomys bought from a native this afternoon for a stick of tobacco apiece. Four Bipistrellus shot this evening by Lionel & Rus.

Wed. June 20: Cloudy on & off but only very slight, brief showers. SE wind. Clear last night.

Botanized down the Govt. trail to LILAI Creek, then down the bank of the creek perhaps  $\frac{1}{3}$  of a mile. Most interesting plant was a Citanyrtus, a genus I have only seen on the mainland before. All collecting done in rain forest second growth usual Macarango-other species type. A big Levianthes collected; conspicuous by the umbrella crown of delicate

Lionel, taking Tinker, left for KEDIDIA (GOMWA BAY? Lionel Evannell has a 400 acre coconut plantation) at 7:30 AM. Purpose of the long walk, partly to examine our proposed camp locality at DEIDEI, partly for a change of scene. Lionel has not had much physical exertion during the past two weeks & he likes movement.

Lionel's jacking results last night were one Pogonomys, 3 Phalangers, 1 Petaurus, 2 Bobsonia, 1 Pteropus. Tinker got 2 Protemnodon, 2 Pteropus. Rus shot & lost a couple of things. One big brown Rattus in traps. The skinning was somewhat lessened, however, by the loss of the 3 Pogonomys purchased yesterday. Rus left them on the skinning table last night & no doubt they were eaten by some prowling village dog.

The day has been eventful in another way for the mammal department. Rus finds himself out of arsenic & alum. Not a left. As he is not sure where his supply is packed at Iamelele, he will have to go down there himself tomorrow. The journey there & back will be at least 10 hours of walking.

Rus has busted the Contax camera. Had rewind trouble and ended up with the shutter out of action.

Thursday June 21: Having rain from a thunderstorm between 10:50 and 2 o'clock last night. Hain for about an hour mid-morning. Thereafter mostly constant. SE ( ) tonight.

Rus, with GALUWINA carrying a blanket & some sandwiches for him left Iamelele as day was lightening at 5:45. Took 5 hours for the down journey,  $6\frac{1}{2}$  for the up. Is in fairly good condition, though tired tonight.



The following is a list of the names of the persons who have been  
 named in the above mentioned report, together with the names of the  
 persons who have been named in the above mentioned report, together with  
 the names of the persons who have been named in the above mentioned report,

constant ( ) 35



With small boy IDAWAWAVETason of the local mission teacher, a guide, I went to Lake LAVU in the center valley of the island. Hampered by rain, the down journey took 1-3/4 hours. Collecting on the return journey made it 2 1/2 hours. Followed from the TUTU\* REA trail at the foot of the grassland patch a fresh track with many branches and an approach to the lake climbed over a low range of hills. Reached shore on - SW side of lake, where people from this part of the country have a fishing camp. Shore steep-to. On a point of land ca. 1/3 mile to W was a native hamlet and in front of it a small outrigger canoe on the bank. Shouting of women there. Men apparently away at the gardens. (A lot of activity now in clearing new ~~gardens~~ ground).

Was impressed with the efficiency and complete harmony with the environment of my small guide. Half hour or so from the lake we passed a new garden house occupied by a woman & two children (one of whom went bush when he saw us). Here the small boy procured a firestick. At the lake he started a smouldering fire within the shelter, found a yard of line & a hook, picked up a pole on the bank and in no time had caught a fish. By 11 o'clock when I called for rice to be cooked for the boy's lunch and my tea billy boiled, the youngster had 14 fishes of edible size. He offered me my choice. I took three of two different species as specimens. The rest he killed by beating with a stick, then dumped the string on the fire. The bait was a small, shrimp caught in the roots of the "water lettuce" (Pistia stratiotes); I have 13 as specimens plus 18 small damselflies from the grassy shore. A disappointing day botanically. I expected a bag of waterplants. Got only four (Pistia, a white Limn anthemus), an amphibious Cyperus and a remarkable amphibious Scirpus 2 m. tall, with very thick 3-angled stem). Shore too steep and water too deep where I was. All second growth rain forest from the grass patch to the lake. Some big ILIMO trees on the flat lands of LILAI Creek. Good sandy loam.

No water birds. I saw only a medium-sized gray heron and a pair of jacanas. No sight of a crocodile which are said to be plentiful. Lake appears to be well stocked with fish. Water sweet. Rock of the steep shore looked like a schist.

Set the two mist nets beside flowering Kapok trees in the village, hoping for smag; flower-eating bats. One so far several nights where Pipistrellus fly near the rest house but yielded nothing. The pips fly around it as they would a haystack. Kapok is a nocturnal flower.

Friday June 22: SE weather continues, more or less Rain enough last night to stop jacking light hunting. Sharp showers between 0 & 2 PM.

Collecting in primary rain forest. (the only area I have seen in the neighborhood) down the track, towards the grass patch for nine species including a cylindrical-fruited Pandanus which looks like one I collected at Waukaiuna & saw at Iamelele. A splendid red-backed Wormia is plentiful & very conspicuous, but sterile. Some other trees of first magnitude are present.

A Macroglossus and a Dobsonia, plus a sunbird and another small bird, in the bat nets early this morning. Nothing in the traps last night. Jacking by Kim and Liklik spoiled by rain.

Lionel returned about 4 PM from KEDIDIA; a ten-hour walk. Reports good travel and gradual ascent through the SALAKADI country to the Salame River divide. Salakadi Population extends about 1 hour past the divide, then 2 hours travel through uninhabited primary forest. Over 40 streams crossed, 16 villages en route.

Lionel reports on outbreak of something which is killing the fish in the seas off Papua and from Goodenough Island south & east through the D'Entrecasteaux. All residents on the radio circuit have had official notices about it. Official opinion is that the cause might be seismic, or biological (i.e. "red tide" of Florida). Govt. Vulcanologist Taylor reported on his way to investigate.

Most of our boys spent last night at a big feast & dance at one of ~~the~~ IL TUTUBEIA villages, 1 1/2 hours walk from here. Lionel, who passed through the village this PM,



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reports a big affair with hundreds present, & great show of pigs, root foods & betel nuts. The climax comes tonight. Tutubeia appears to be the beginning of the Sala kadi country. Here at Agamoia the affinities are with Fagululu.

Sat. June 23: No rain last night or today. Some thunder and dark clouds up valley in afternoon.

My last day in the field here. Went up the mountain track to where it branches left to villages, then splits again. All second growth forest beyond the road fork. A of primary forest gully yielded a few interesting trees including two of Ficus — one with shining Garcinia-like receptacles. Despite poor collecting, I have more material than I can dry with the one oven I have with me. Am continuing to collect in series of eight when the material is available.

Rus shot last night a Petaurus & a Dobsonia. This afternoon he & Lionel visited a cave about a mile N down the slopes from camp & collected two Dobsonia & 8 Hipposiderous ceovinus. Cave is under a horseshoe shaped waterfall about 40 ft in height, to IL E of the grass patch. Said to go in ca. 60 ft. & have 3 short branches. Entrance in water waist deep. Rock said to be a sort of conglomerate. Name of cave NIBOTHIN.

Sunday June 24: Again no rain.

Drying plant collections & pickling one bundle for transport to the coast tomorrow. I have 52 numbers, 500 sheets of specimens for the camp. A poor locality for me. Most of this forest is second growth.

A Wallaby & a white-tailed Pogonomys, shot last night by Tinker ~~mixjacking~~ Lionel, out jacking, confined his attention to bats, & got nothing. Boys sent to the bat wave this afternoon, returned with 10 more Hipposideros.

Gave boys time off this afternoon to attend church. Services held at no regular time, but when the congregation assembles from outlying villages some metal object is banged as a signal. Other missions I have seen, at Iamelele & Saibutu have log drums.

Monday June 25: Back at Iamelele I. Had a good fine day for the transport. I left Agamoia at 7:20 with the intention of botanizing on the road and, lunching on a small stream about an hour the other side of Fagululu, arrived at Iamelele at 3:15. Rus passed me on the road and arrived about an hour earlier. When I arrived the carriers were just beginning to come in and drop their loads — 32 of them. I traveled by the Fagululu-Nibbuwo road; The carriers and Lionel by road which went first to Lake Lavu then down the flatlands of the valley via Iamelele #2. This road muddy in places and the distance much greater than by the hilly Ibubuwo route. Lionel had more people (Agamoia area) offering to carry than he had loads. He left Agamoia at 8:20.

Everything left at the Iamelele resthouse (in charge of the VC) appears to be in good condition, and intact. The VC is not a person who has inspired confidence, but he was the only man to leave in charge of the cargo.

*June 25, 1958 Jackling*



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Friday June 29: Still no sign of the "Betty Ann." Moreover about 11 o'clock Lionel and Rus returned from Nou-Nou in Mrs. Gribben's small launch, bringing the news that that the ship had left Nou-Nou Wednesday some time for Ricky Leach's plantation at the north end of Goodenough Island.

Expecting to meet the Betty Ann this evening or in the morning, I left the beach camp for Nou-Nou at 11:20 and arrived there two o'clock. Heavy rain most of the way; steering blind, but very little sea in the deep water of the strait.

Mrs. (Anna G.) Gribben has had a trade store at Nou-Nou since the end of 1953. She has built well, of European materials; has a very comfortable and tasteful house. Piano, electric from a small Southern Cross diesel plant; but no septic system. A water supply will soon be piped down from the hills. Her house, also labor houses, mosquito-screened. Is building a branch store on Magifa Island; her husband (Ted) recently opened at Mapomoiva on Fergusson Island. Says they are doing well. Native produce mostly raw coconuts which natives carry in in bunches of four hung on poles (price a penny each; 12 for a stick of tobacco). A fair amount of black lip shell (a shilling each) and truchus shell being brought in, mostly by Magifa people, who dive for it. Vendors receive cash on the spot for produce, then, after a pause of varying length, hand back the shilling or two bob for tobacco, white rice, ship's biscuit, etc. Mrs. G. has a very good stock of trade goods; makes women's dresses and children's clothing on a sewing machine; even sells bread (2/- a loaf) when asked for it.

Nou-Nou is in Mud Bay a little to the north of Wallagi, head station of the Methodist Mission on Goodenough. Said to be two white nursing sisters at Wallagi. Mission expected to be self-supporting, says Mrs. G. Annual drive for funds in August. Last year Wallagi collected over 1100 pounds. A lot of labor-payoff money comes to Goodenough. War damage payment still being hoarded in the villages. Every now and then American and Japanese notes are brought in.

Roman Catholic Mission has recently established a mission in Mud Bay with about half a dozen converts (?) from methodism. Father Abbott, in charge, lives at Wataluma on the north end of the island. Visits Mud Bay once a month to celebrate mass.

Saturday June 30: Still at Nou-Nou, enjoying the hospitality of Mrs. Gribben. Roast lamb for dinner last night; filet steak and eggs for breakfast this morning. Still no appearance of the "Betty Ann", but there is a native report that yesterday some time she passed Nuatutu en route to Wadelei in Hughes Bay. A proper mess up.

Walked in the morning to the head of Mud Bay where, near Alcaravia village, there is a hot spring. Water hot enough to give off steam, but is bathed in by natives. Akaravia seems to be the name of the hot water as well as the village.

Lalang grassland on the steep slopes of the hills and low mountains gives way to rain forest second growths in the head of the bay. Some sago and ~~manga~~ on the coast. The mission has the use of extensive garden lands on the slopes. According to Mrs. G. a boy or girl child is acceptable at the mission school only if they are big enough and able to do garden work.

"Betty Ann" came into Nou-Nou at 6:15 PM and immediately began to load 52 bags of copra from Mrs. Gribben's storehouse (about 14 bags to the long ton) The native captain such a timid-appearing elderly Milne Bay man that I did not have much to say to him about his long delay, which has cost us four valuable days of working time.

Sunday July 1: Very heavy rain between about 12:20 and four o'clock last night. Small creek at Nou-Nou roaring in flood, and rocks in its bed grinding loudly.

Boarded the "Betty Ann" as day was about to break (6 o'clock) and by 6:30, having bailed the whale-boat in tow and pumped a lot of water from her bilge the Betty Ann's gray



Expected to meet the boat and this morning I left a message for you at 11:30 and entered those two blocks. I have made many of the very best things but very little of the best work of the artist.



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engine was started with a roar and we set out, very cautiously, for Imelele beach. Skipper told me he did not know the "passage". I was told later that some time ago he ran a vessel on the reef in these Imelele waters. Mud Bay tinged brown with mud from the hills, and much driftwood afloat. Anchored off beach at 8: 8:30.

Rain began as the cargo was loaded. Got away at 10:15. A wet, rough, comfortless of 8 3/4 hours brought us to Kedidia Plantation (Norman Evennett) in Gomwa Bay about 7 PM. Having no leadline, we could not go in to Deidei in the dark. A flushdecked ketch 60 feet long and carrying about 300 bags of copra, the "Betty Ann" has no accommodation for passengers. There is a permanent awning over the tiller and after hatch, a canvas sheet over over the forward or main hatch. Most of our cargo was stacked on the hatch covers, where there was some wetting by rain. There was room aft for our chairs. After a time Rus, terribly seasick, lay flat on his back on the deck, where seas thoroughly wet him twice.

Lionel piloted us into Kedidia, where we were invited ashore by Norman Evennett and had a meal and slept in his small two-storied house. Norman, an educated half-caste, quite well off financially, is living with a half-caste woman by whom he has two bastard sons (small children). Very hospitable. House half native. Norman half drunk on beer and rum which arrived two evenings ago from Samarai. Empty bottles were strewn on the grass where thrown out the front door. Another half-caste, Tommy Rocca, was there - sober. Norman who inherited his father's estate three years ago, bought Kedidia for 8000 pounds; 400 acres of bearing coconuts. Said to be difficult to work, and not properly run by Norman, who is not famed for his energy. Plants are on low sandy ground which had to be drained. Trees well grown and apparently bearing fairly well. No wharf; very gradual sloping beach; anchored in three fathoms; sandy weedy bottom, at least close to beach.

Monday July 2: We were astir as soon as we could see, boarded the Betty Ann, and by 8 o'clock had everything ashore at deidei, only about a mile c. SE across Gomwa Bay from Kedidia. Sent collections and surplus stores on to Samarai. Wrote Buntings that we wished to be in Samarai not later than Monday 9th; they have advised that they have booked us for Misima on Steamships Trading Coy's "Kari" due to leave Samarai "about the middle of July." Norman Evennett had agreed to take us to Samarai from Deidei, but his vessel, the "Maimera", is laid up with a broken gear case.

Rus went promptly to bed with symptoms of pneumonia; taking acromycin. Better, and eating this evening, but took no sundowner rum.

This afternoon Lionel walked down the coast to the RC mission at Budoia and arranged with Father Atchison for a charter of the mission 55-ft. launch "St. Paul" to take us to Samarai on the 9th -- to be here to load the evening of the 8th. Price of the charter still to be determined; better left to Buntings, who know about such things.

Five *Pipistrellus* brought in by two small boys, three of the bats very young

A real wet day. Almost constant rain, some of it very heavy, from about 9 AM to present time (7:45) PM. Camp is set and the mammal boys have traps out.

Tuesday July 3: Light rain before dawn; fine but generally dull and overcast after that.

Botanized down the coast and visited the Catholic Mission at Budoia, about 1 3/4 miles distant according to the 1-mile map. Was well received by Father Atchison, priest in charge, and a very young priest there since February. Both from Melbourne. Atchison has been 10 years in the country and 6 years at Budoia. Has visited the Mission of the Sacred Heart territory inland from Yule Island as far as Obiobi in the Kuni country. Told me that Brother Paul, whom we knew in 1933, is still alive and at Kubuna; "Brother George is in disgrace again," having lost another boat and been sent inland to Onongo by the bishop, where he will not be able to do any more damage. Budoia is a Sacred Heart mission. Saw only the priest's house. Comfortable place with native roof and sawn lumber floor (which needed a wash).

Only a small gathering of plants, but it included a red *Mucuna* (*D'Albertis Creeper*)



base ratio between the two. The two end member are  $\text{H}_2\text{O} = 1$  and  $\text{H}_2\text{O} = 0$ .



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with exceptionally big flowers. Another good plant was a small Dischidia common as a root climber on trees near the beach.

Nineteen mammals on the table today, including 7 Pipistrellus (not 5) brought in by natives yesterday. An adolescent Uromys and 4 Rattus ruber in traps. Four Petaurus got from a tree by one of our boys. Three Pteropus shot at Kedidia by Lionel during the day. Rus has recovered well and is back at work.

Deidei (Falagwa of the 1-mile map) has the most comfortable resthouse we have occupied on the trip. A dining room and three rooms, all small, which serve as bedrooms, a bathroom and a kitchen. Also a spring house nearby, barred in front so that only small dogs and pigs can get to the water. There is the usual barracks house for the boys. The most remarkable thing about the arrangements, which include a wash basin shelf in the bathroom and ample shelf space in the kitchen is pandanus mats on the floors of the bedrooms and living room. Have never seen this before in a New Guinea rest house. We have rigged a fly for mammal preparations and my two plant dryers. I work at a table we built on the front verandah. We also have a back verandah which serves for storage space.

This appears to be a subsiding coast. All that I have seen is of hillocky broken coral rock, except about  $\frac{1}{4}$  mile of gray low cliff this side of Budoia which is a mixture of volcanic grit and rubble of some light-weight rock. Big old roughbarked trees; Calophyllum, Terminalia catappa, Barringtonia, lean out over the beach in places. Beaches of dark gray sand, narrow but only gradually sloping (low tides?) to shallows in which there is an abundance of a broad ribbon-leaved marine angiosperm collected formerly ~~in~~ at Hollandia and Menapi. Narrow belt of littoral forest, semi-swampy and of uneven width in which Heritiera and Inocarpus edulis (the latter with remarkably fluted dark gray trunk) are prominent.

Wed. July 4: Very heavy rain last night (over 5 inches on Kedidia gauge). Rainy morning. Clearing about 1:30. Sprinkles tonight, but weather seems to have changed. Have not seen the sun since Saturday. Rest house area under water this morning. Two inches of water in the preparations fly. Boiling ~~water~~ drinking water as the surface water is running into the spring well.

Left about 2 o'clock on a visit to the hot springs area, about 15-20 minutes walk from camp. Had as guide a local man who later turned out to be from Goodenough Id., married into these people. He seemed to know the thermal well, but had I known his background I should not have followed him with ~~such confidence~~ even the partial confidence I did. This thermal area very different from that of Iamelele. Very big boiling springs, but no smell of sulphur, and only clouds of steam rising. First spring area probably the most extensive, called #2. As far as I saw it consisted of a low, domed shield of resounding, cemented sediment through water boiled to the surface and above it in many places and there were holes and fissures down in which one could see boiling water. In other the cement shield had caved in, leaving dry holes, or just cracked concavities. In one ~~my~~ place my guide scratched about ~~under~~ about under a cornice and brought out salt incrustations (sodium chloride). At the spring highest on the dome an old man was splitting open and eating some Inocarpus nuts he had cooked in the boiling water, and my boys said he had also cooked a crow and eaten it (saw no feathers). Our laundry man boiled here yesterday.

No. 1 spring area has a powerful spring which at intervals of a minute or so spouts to a height of perhaps 6 feet, with much steam. No surface run off, but below it is a terraced slope colored a rusty red as if by iron. Photographed that and the first area in the very bad light. MacGregor (or some early writer) told of several springs in the area which spouted in geysers 60 feet high. Nothing like that now. Lionel tells me that recently a volcanologist made a study of the area and proclaimed the springs the hottest in the southern hemisphere. Hope to go back in good weather for more photos.

To the north side of the thermal area is rain forest, to the south Melaleuca savanna with coarse grasses. Found stunted examples of Melaleuca (aff. leucadendron) flowering very close to hot springs. Along the grassy path were, among other herbs, a Stylidium with







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small pink flowers and a white Habenaria. The real savannas, where Themeda is said to predominate, should be interesting botanically.

Only jacking last night was by Lionel. who got nothing. A Bandicoot, big brown Rattus, and four small brown Rattus in traps. A native brought in a coconut shell full of live Pipistrellus, which were let go. No effort at bat shooting tonight. Lionel and his boy Tinker out jacking.

Listened in the evening to a radio broadcast of the presentation of the Queen's and regimental colors to the Pacific Islands Regiment (PIR) by Governor-General Field Marshall Sir William Slim in Port Moresby. Announcer careful to append all decorations when mentioning names (K.C.M.G., C.G., D.S.O., M.C., etc etc). Drill apparently very good; no raggedness in movements. An English regimental sergeant major amusing with his commands, "Stand at hease." The old REM said to have done a splendid job in knocking the regiment into shape. The regiment first saw action in Milne Bay in 1942, but the Japs were too good for them, and they ran.

Thursday July 5: Some sun this morning, also showers. Heavy showers in afternoon. Dirty SE weather. There has been thunder with the rain at night, a feature very common in our experience on Fergusson.

Walked across the peninsula to Numanuma Bay, reached in about an hour, most of the way over secondary grasslands of what might be called tall, rough grasses. Evidently a big population on Numanuma Bay. Small, deep bay screened by islands. Beach steep and enough surf breaking on it to be heard plainly at Deidei at night. Some fair-sized canoes on the beach, covered with palm leaves. Only a few women fewer men, and a crowd of small children at the big village at the end of the road. Country passed over all gritty volcanic, fragments of obsidian often exposed on surface of the gray soil, which is black on top when wet. Grasslands carry Albizziaprocera and a few spp. of shrubs such as Melastoma and a slender Tephrosia. A Sorghum or Sorghastrum the only grass in fertile condition. Hibiscus tiliaceus common as a tall shrub or small tree on the grasslands, especially adjacent to forest regrowths. Big, well fenced yam gardens on the low divide of the peninsula, cut out of sparse rain forest regrowths. (Diseased leaves of the yam (only 1 sp. grown) collected to send to Dr. Shaw in Port Moresby). Patches of Melaleuca savanna forest seen on distant higher ridges.

Nothing in traps last night (they were moved in an effort to catch Hydromys). Lionel shot a Pteropus last night; Tinker a female Phalanger with young one.

#### Samairai

Radio message over the general broadcast from Buntings advising that no definite date is available for the sailing of the "Kari" for Misima, but it is expected to be about the 13th and Buntings are sending the "Kedeluma" to pick us up either tomorrow afternoon or Saturday morning. Someone has been using his head at buntings.

Friday July 6: Strong SE wind from sometime after midnight to after dawn; very little rain. Changed to very wet and E to NE wind, with occasional very heavy squalls, towards noon.

Planned to visit the hot springs ~~again~~ area again, in the hope of finding proper grasslands, but weather prevented this. (Had to work on collections on hand before anything else.)

"Kedeluma" arrived from Sewataitai about 2 o'clock and by three all but things needed for tonight were on board. Had fine weather for this. Fred Riley who came to Kedidia to recruit boys for trochus shelling, says he had rough sea between Trobriands and Fergusson.

Fred gave and I will hand to Anthropology at the Museum, the curious potsherds from a small atoll about 40 miles approximately NW of the Lusancay Islands. Several fast eroding small coral atolls there, all uninhabited and with very little vegetation. Other bits







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of pottery were present; also some transported boulders 15-20 inches in diameter. The pottery thick, smooth, brown, and evidently from vessels shallow in shape. The natives of the Lusancays today have very little pottery, which they buy elsewhere, and it is very thin and of different design. Will try to get a position for the atolls from Riley in Samarai next week.

Tinker shot a cuscus and a big female ~~Uromys~~ Uromys last night. Lionel ~~with~~ and Rus, with a 14-foot dinghy and outboard motor borrowed from Kedidia, tried for dugong after dark but did not sight any. Lionel shot a crocodile. Nothing in traps. Six Pogonomys bought from a Kedidia plantation boy.

The weather has been against us at this camp that and the delay we had in getting here have made it expensive for what we have gained in collections. These number 8 species of mammals, of which the 2 Rattus probably are most valuable. I still have some cataloguing of odds and ends of botanical collections to do. Results have been poor, however, and I was not able to see a good development of the primary savannas of the peninsula. Insect collecting has been about average, with Odonota best represented. Two or three snakes and other herps have come in.

In all, 18 species of mammals were collected on Fergusson. Total mammal specimens about 220. Total botanical collections for the trip to date are just on 1100 numbers.

Saturday July 7: The alarm sounded and I lit a lamp at 3:40 this morning. Weather threatening, but no rain falling. The crew of the Kedeluma hard to arouse and it was five o'clock before we had our remaining belongings aboard and 5:15 before we left the anchorage at Deidei. Arrived in Samarai about 4 PM.

Had only a little rain on the trip. The weather changed to NE and E, moderating the sea, and we had an unexpected degree of comfort on the Kedeluma. Clouds on the mountains of the D'Entrecasteaux and the mainland, plus rain squalls there, spoiled views and photography.

Dusty and Ailsa returned from Australia, via Carr's Air and Milne Bay (special flight) at 10:30 pm. I am staying at Dusty's house, Rus at the boarding house ("Crescent Guest House," of Mrs. Julie Hansen).

#### Samarai

Sunday July 8: Weather about easterly; occasional showers; patchy sunlight - the most sun I have seen in a week.

Worked on a stores order to present to Buntings in the morning; we will take two months supplies (foodstuffs) to Misima and replenish stocks in about a month after arrival there. There were callers in the house much of the day.

Talk mainly of interest too local for recording. Learn that the airport or air-drome on the mainland just across China Strait from Samarai, which was under construction when I arrived in the country, has been abandoned as too costly. About 10,000 pounds had been spent; estimated cost 40,000. Qantas is reduced to two old Catalina OPEYs for services such as the weekly run to Samarai, on which land planes can not be used. It is problematical what will happen when these old ships have to be scrapped, which cannot be long. Qantas may be willing to give up the Samarai service in favor of Carrsair, which is reported to be willing to do the run with a float plane to be purchased from the U.S. with government assistance (the Samarai mail and passenger service is rated as an essential service).

Monday July 9: Glorious sunny day after hard showers just before daylight. Weather SE.

Put in the stores order and waited more than half the day for Bunting's store man to clear working space for us in the godown. Paid each of the boys 3 pounds: what they have coming to them in Sunday money.







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Called on Alan Timperley, O.B.E., the new District Commissioner. We had met, he said back in the thirties on one of the previous Expeditions. Put it on him for boat transport assistance in the Lousiades, and am promised this. Visited the bank, to find that a remittance which should have come from New York last month has not arrived. Met there Bishop Strong of the Anglican Mission who, from his clammy handshake as "Bish the fish". Pleasant enough. Invited me to visit Dogura (his head station and cathedral). Very properly dressed in suit and purple bib. As Bishop of New Guinea, Strong has an appointive seat on the Legislative Council or PNG. Is often in conflict with commercial interests.

Learn that the "Kari", which is to take us to Misima, might be ready to sail at daylight on Thursday. This gives us less time in Samairi than I would like to have to get everything ready for an absence of 5 or 6 months.

Tuesday July 10: The good weather continues. SE breeze; cloudy morning sunny PM.

We have worked all day packing specimens and and readying collecting supplies. there is not much left to do tomorrow.

Rus spoke with Barbara back in New Jersey. He had difficulty in hearing her; she had very good reception at her end. The cost for three minutes was five pounds odd.



Called on Alan Timberley, G.O.P., the new District Commissioner. We had met  
he said back in the thirties on one of the previous expeditions. But it was for  
port transport, sailing in the Lonsdale, and he promised that. Visited the bank, to  
find that a remittance which should have come from New York last month had not arrived.  
Met there a history of the English literature, from his of many notebooks and "The  
Green", a history of the English literature, from his of many notebooks and "The  
Very proper dress in an outfit and a white shirt. As a member of the  
an appointive seat on the Legislative Council of the island. It is often in contact with  
of interest.

Learned that the "Herald", which is to come as a weekly, might be ready to sail at the  
light on Thursday. This gives us time to think that I would like to have a  
everything ready for an episode of 5 or 6 months.

Friday Jan 10: The good weather continues. 35 degrees, cloudy morning and P.M.

We have worked all day packing equipment and are ready to collect supplies. There  
is not much left to do tomorrow.

Was alone with Barbara back in New Jersey. He had difficulty in hearing from me  
and very good reception of her end. The last few minutes was very faint and odd.

MADE IN U.S.A.  
G/earcopy of Union State  
Cathode



Wed. July 11 - In Samarai. (Kari's note.)

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Thursday July 12—Saturday July 14: Voyage on the 50-foot river scow "Kari" from Samarai to Misima. Tediously slow trip and the last two days quite rough southeast weather. The Kari, built by Bjorne Halvorsen, Sydney, in 1951, owned by Steamships Trading Coy; one of several scows known as "K" boats. In a poor state of maintenance; had to reduce speed to 4-5 knots on account of a worn propeller shaft overdue for replacement. Cabin had only two bunks. Lionel slept on the fantail aft - when the weather was not too rough. The ship fed us. We delayed departure from Samarai for half an hour to pick up freezer meat, provided as a special gesture by Dicky Paul, steamship manager. Two pounds of the toughest steak it would be possible to get.

Left Samarai at 6:30 on Thursday; anchored off Gabugabutau Island, Conflict Group, 9:15 pm. Managed at present by an Englishman named Mist, who did not put in an appearance. Frequent turnover of managers at the Conflicts. Remote; no native population.

Friday 6:45 am left the Conflicts after unloading cargo. Ship's native skipper in no hurry. Anchored off Nivani Island, Deboyne Lagoon, 5:50 pm. Just to the north of Nivani is Pannapompom, further north and larger, Pannieti (spelling). These islands apparently of reddish clay; they have a brownish appearance probably due to the type of rather low-looking forest they carry. Went ashore to the hospitable house of Albio Mundt, whose father owns and planted the islands to coconuts. Mundt Sr. now on his second ~~crui~~ world cruise in three years. Albie is a half-caste out of a Greek-Papuan cross; married to an attractive Scottish girl (Mary) who speaks with a broad accent and has made a good home. Bride of World Mar 2 in which Albie served in the RAAF. His brother Harry there at Nivani, too. Much quieter type. Halfcaste out of a Misima woman (ancestry according to Lionel). Also a guest was Mac Longmore, a personable copra inspector from Samarai spending the third month of leave from duty with friends throughout the islands.

Nivani long ago was district headquarters for the Louisiades. During the last war the Japs had a flying boat base here. The remains of a Mitsubishi (?) bombtr, crash landed after the Battle of Coral Sea, lies on the opposite shore of Pannapompom. Until two or three years ago the fortnightly Qantas flying boat landed there. There is still a buoy for the flyingboats in the strait between Nivani, for the other side of the island is exposed in the NW season, and the small boats of the area change anchorage with the seasons.

Saturday 14th left Nivani at 6:30 pm, arrived Bwagaia on the SE end of Misima about 2 o'clock. Total steaming time about 32 hours for the 140 miles. This, after clearing Deboyne Lagoon, the roughest part of the trip. Heavy wind; high seas. Only occasional glimpses of parts of Misima. Western end of the south coast, which we followed, very rugged and cliffy. Old coral limestone elevated several hundred feet, apparently terraces. Had poor views. Sea pounding on cliffed shores broken here and there where creeks ran from the mountains to the sea. A nice place for a propeller to drop off.

Bwagaia, administrative headquarters for the Louisiades sub-district, obviously in a run-down state. Nobody put in an appearance at the small wharf but a few natives, in Saturday afternoon frame of mind, and several small halfcaste boys and girls. Buntings and Burns Philp stores (latter a big place) still stand near the wharf. Walked up the slope through scattered government buildings until we found the house of Patrol-Officer Bruce Teague, in charge of the station in the absence of patrol of ADO McLeod. Bottles and half-glasses of beer on tables; an unshaven, red-eyed young chap reclining in a chair, turned out to be Des Fitzer, in charge of native cooperative stores in the sub-district. Teague eventually appeared; in a daze. It developed that a resthouse that used to be here for the use of travelers was blown down in a hurricane in 1952. Fitzer came to his senses first and offered us the use of space in a new co-op bulk store for the storage of our cargo. Most of the things had been carried the hundred yards or so to the co-op place when Teague sent for the lorry to a government store behind the wharf which contained only half a dozen cases of government canned meat. Meanwhile, two young and very sober men put in an appearance. One turned out later to be Ian McCollum, a cadet patrol-officer of three months service, and the other Griffin, local schoolmaster; We are staying with Ian (farmer's son from the Tweed River in NSW). Had dinner with Griffin (Bill), rather girlish in manner but







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with very hairy legs, who as a patrol-officer or cadet was guide to R. D. Hoogland, CSIRO botanist, in 1954 (or 53-- in Ru's first year in the field. Griffin was with him four months. They went into the Biniguni area after Cape Nelson).

Sunday July 15: Very heavy southeaster all day. In drizzlinf rain we started about 9 o'clock to walk inland to the camp of Dick Gladstone, who was reported to have a house on Mt. Sisa (1400 ft.) which might suit us as a collecting base. Followed the old main road which led to the numerous mines which were worked in the interior. Good graded track, narrow but passable for heavy motor vehicles. reached Kulumalia (Gladstone's place) in an hour; about a  $\frac{1}{2}$  mile to the left from the main road, an altitude of about 500 feet. In fairly heavy rain most of the time after we entered the mountains. Small, native-built house; quite comfortable, and apparently well supplied. Gladstone a powerfully built, snady haired man of 50; energetic and intelligent; apparently fairly well educated. Mrs. G. a very bright faced woman, seemingly happy with her lot. Young Jimmy, about 8, seemingly the only child. We had beer, morning tea and lunch, and were offered the Mt. Sisa house and transportation to it from Bwagaois.

Returned to the coast by a route which led direct to the sea down the valley of the main creek of these parts. About  $2\frac{1}{2}$  miles to the Methodist Mission at Loaga, thence probably about three miles east to Bwagaoia. No rain after about noon. A considerable amount of boggy sage swamp in the lower part of the valley. Between the Mission and Bwagaoia a sizable coconut plantation owned by the halfcaste sisters Coppard.

Very little primary forest between Bwagaoia and Kulumalia; great abundance of treeferns, a scrambling of Gleichenia, and a big-leaved vine of the Convolvulaceae in the regrowths. Some good looking forest just above Kulumalia on the mountains; Other forest greatly damaged by the cyclone of 1952. No primary forest seen on the coast. All coral limestone (saw the entrance to one cave in a sinkhole). Patches of open grassland (Themeda) and a sort of Melaleuca savanna with very thick-boled low trees.

Gladstone reported to be quite prosperous. - Worked for the Kulumalia Mine (owned by a New Zealand company) before the war; he and his wife were here for the evacuation in 1942). Returned after the war to reopen Kulumalia on his own account. This a failure. Then worked a very rich show on the north side of Mt. Sisa (Mararoa) from which he took L16,000 in less than two years. Now working a small mine about  $1\frac{1}{4}$  miles from his home up the Mt. Sisa road; apparently paying well. Employs 9 boys and has a battery.

Monday July 16: Heavy SE wind all last night; sharp shower before daylight. Were blessed with good weather for our move into the mountains.

Hastily organized three weeks food and ample collecting supplies and about nine o'clock left Bwagoia with all gear and about half the boys on a 3-ton trailer towed by a 16 ph Fergusson tractor. Transport outfit the property of Dick Gladstone. who drove most capably on the narrow road. Some of the small wooden bridges barely strong enough to carry the weight of the trailer, which often lurched alarmingly and made crashing noises on the culverts. An occasional push necessary by the boys. Reached Kulumalia about 9:45 and had the inevitable morning tea before proceeding further. This last six miles on the road (total of about 9 miles from Bwagoia) provided some hard going and frequent pushing. Road had been serfaced with crushed stone for about 8 miles to the junction of a road which went to Cuthbert's Mine (Mona?), but the surface had been washed off in places, and where the ground underneath was the red-dish porphrhy (sic) which carries the gold it was very slippery. Unloaded about one third of the cargo at the road junction and went as far as we could with the rest, at a place where the trailer and tractor could be turned separately. Much labor where there was a small landslip and a bid dead tree over the road. A final carry of about  $\frac{1}{2}$  mile from where the cargo was dumped (two loads from the road junction). By dark everything was in the Mararoa house, and our ten boys about done for. No time for them to put up a fly, so they slept in the house with us.







House, of galvanized iron with sawn timber floor, about 28 ft. square and consisting of two rooms and a shuttered verandah. In the bigger room are most of the stores and Lionel and Rus sleep there. I have the smaller room for working, sleeping and space for my plant dryers. Our living space and Rus' work place are on the verandah. To be erected are the boys' fly, boys' small house, and galley. Old galvanized iron lying around will be useful for roofing. There is no palm leaf here. There would appear to be good primary forest not far below us on the slopes. Above us are old mine workings and steep slopes covered ~~with~~ mainly with fern.

According to Stanley's geological map of 1915 (on loan from Gladstone) Mt. Sisa is 1300 ft. high. Gladstone says our camp, close below the summit on the north slopes, is at about 1150 feet. About NNE from camp is a good view down the forested valley of Ira (St. Patrick's) Creek to the coast at Boyu village.

At considerably less than 1000 feet on the way up I saw either Castanopsis or Quercus in flower, and a dipterocary in fruit. A number of strange trees in flower or fruit, a second growth Weinmannia in flower (like the Mt. Dayman species).

Stanley, in his report on Misima, gives native name of St. Patrick's Creek as ARA. (Stanley, Evan R. Report on the geology of Misima (St. Aignan) Louisiade Gold-Field, Bull. Territory of Papua. No. 3, pp. 1-24, 5 figs., 3 maps, 1915).

Tuesday July 17: Heard some rain on the iron roof during the night. Cloudy this AM but no rain all day. Variable wind. High clouds still travelling fast on SE wind.

All hands rigging camp in morning, cutting trails (or rather, clearing old trails) in afternoon. I did some looking around and caught some insects. An Ornithoptera of these levels very different from any we saw in the D'Entrecasteaux. Moths caught at the light last night seemed mostly quite different, too. Caught a small, slender skink and saw three other spp. this afternoon.

Two young boys from the Methodist Mission on the coast brought up an apparently half grown gray cuscus (Phalanger) with black dorsal stripe. Rus says different from any collected by us so far. On Sunday, in the main drive of the old Kulumalia Mine, Rus collected five small bats (Miniopterus and Hipposideros), the latter perhaps different from any of our collection (narrow ears). The only bats known from the island are a Pteropus, an endemic Kerivoula, and a Rhinolophus.

A very clean, bald-headed old native from one of the north coast villages (Gulewa), shown Rus' small paintings of mammals (only mammals already known from our general area, unfortunately) recognized the cuscus we already have, Petaurus, most of the bats, Rattus, Pogonomys and Hydromys. Did not know bandicoots or Doctylopsia.

Rus suffering with toothache. Lionel somewhat troubled by a red lump on his tummy which might be a cyst (has had  $\frac{1}{2}$  it for months, he says).

All the boys on a 10/- per month increase in wages as of today, making a total of 35/- or about 4 dollars a month. Gesture in appreciation of three months of good services. We have one dud, the sipoma-infected Kwilakwila, who should have been paid off in Samarai, but in the rush of business in the few days we were there I forgot to see to it.

Galuwina replaced the above Dipoma today as insect boy.

Wednesday July 18: Another fine day. Partly cloudy morning but not a drop of rain. Quite cool last night; was not really warm under one blanket. 72 F. at 7.30 pm tonight.

Misima is noted for sandflies, which someone long ago said infested the whole island. I did not feel at Bwagoia. Up here, however, they are quite a nuisance in the evening.

Botanized approximately past Gladstone's lake mine to the bed of Ara Creek. Not much more than ten minutes walk from camp. Steep slope from the mine to the Creek. Creek small there, not more than  $\frac{1}{2}$  mile from its head. Bed much altered years ago by miners working gold. Saw several yabbie-like crustaceans in the pools. Had good hunting for plants. A number of interesting things included a very common new genus. Collected a number of mosses, some of them normally ~~high on trees~~ species high on trees, but here growing on the logs of trees downed in the cyclone of 1952.

Nothing in 90 traps last night. Rus, out jacking, saw nothing. Lionel shot two Phalangers orientalis (a gray and a yellow) and saw Nyctimene and a bat which he thinks







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was MacroGLOSSUS. Mammal boys, out this afternoon for Pogonomys, found nothing. Rus, out for lizards, brought back nothing. Rus complains of a headache, ate a good dinner and went to bed. Lionel out jacking, and will set a bat net at a likely place he saw last night. My boys brought in sticks for a bat net at camp; Rus set the net.

Spare boys cutting track towards the west. We ate today two blue pigeons, shot by Lionel, who considers them the same as the D'Entrecasteaux bird. Kim always achieves an excellent soup from a bird. This evening there was fresh bread, too, A meat pie, mashed potatoes and canned sauerkraut. Some sort of custard pie made without eggs or fresh milk (a bit too much pie for one meal).

Lionel had a touch of malaria this morning. He had not taken the prophylaxis three camoquin pills for two weeks. Apparently one has to keep up the dosage quite regularly, in that strength, in malarial country.

Thursday July 19: Light showers from some time after midnight until about 8:30 AM.

SE weather. Still a snap in the air in the evening.

Botanized this morning down a track which Lionel has opened in the past two days in roughly a NW direction towards the mouth of Ara Creek. My farthest point probably about a mile from camp. First 1/3 mile or thereabouts was diagonally up the N slopes of Mt. Sisa past Alexander's claim to the crest of a lateral northerly spur which for a short distance separates Ara Creek waters from Kobel Creek headwaters. (Mt. Sisa is the head of all the main streams of this part of the island.) These slopes all denuded long ago by mining operations; covered mostly with Gleichenia and other ferns. Good view from the ridge crest (late morning) of Mt. Koitau and the western end of the island. Photographed this, and found later that my lens may have been fogged.

A number of prospecting pits, costeens, and one deep shaft were exposed in the track cutting operations. (Sipoma fell into the deep shaft but saved himself by clinging to the fern). These all in the fern except two or three trenches which looked more like races than prospecting trenches.

Below the fern an area of polewood second growth forest. Then a patch of primary mid-mountain forest on a ridge point of yellowish clay. This forest practically a pure stand of Castanopsis. Characteristically open, or at least easy to get about in, under the canopy. Most abundant undergrowth elements a dwarf Pandanus with subglobose fruitheads, and a very slender Cyathea, plus several stiff ground ferns. Two epiphytic Dendrobium collected in the forest, one a very fine whitish species which I have still to examine in detail and photograph, the other recalling Iris. The Castanopsis was in flower. A good day, bringing my numbers for two days to over 50.

The bald-headed north coast boy still comes up in the morning and acts as guide for the track cutting operations, which by this time must be fairly close to the main Ara.

Looking west from the high spur today, I was struck by the great expanse of primary forest on ridges and in valleys. The only disturbance by man was where a timber road went about NW into the Kobel valley from Cuthbert's Mine.

One Rattus, apparently allied to the mountain species of the D'Entrecasteaux, in Rus's own traps this morning; nothing in other traps; all traps moved today. Last night Lionel shot a Pteropus, and his net produced two MacroGLOSSUS. No other mammals taken. Rus and Lionel in afternoon visited a drive drive by which Dick Gladstone drained his lake claim; saw two bats which got away.

Friday July 20: Sharp shower about 4 am; drizzly dawn. No rain after that, though frequent dark clouds drifting over from SE. In sunshine the air or atmosphere here has a sparkling quality, probably from the glint of the generally smooth and smallish leaves of the forest canopy trees.

Spent the first hour of the morning after breakfast in photographing two good Dendrobiums collected yesterday (#27411 and #27412, the former later painted in watercolors by Rus). Then botanized down the road to the NE corner of the mountain, where several old coconut palms (bearing well) of a flat shelf below the road mark the site of the camp of a halfcaste miner (George Brett) who was shot by the Japs at Finschhafen. A nice lot of plants including a Weinmannia and another tree of the family, a fine red Loranthum (photographed in color), a common regrowth Cyathea, etc. Have 73 spp. for three days. A good break after the mostly hard going for plants on Fergusson.







The new trap sets yielded four *Rattus* of 2 species last night. Lionel's bat now tended by Rus' boys, yielded 2 *Macroglossus*, and Rus shot another. No jacking by Lionel. Tinker, jacking, claims to have shot a *Petaurus* and a big arboreal rat, but brought nothing in. Rus shot but could not recover on the very steep forested slopes, a cuscus and a *Petaurus*, plus an unknown small bat.

Our baldheaded native friend and Sipoma completed cutting track from where I left it yesterday down to Ara Creek at the old camp of Scottie Buchanan, thence up the Ara to near camp, completing a circuit. This opens up much country for plants. Jacking is only feasible this creek.

Nights are pleasantly cool. Lowest temperature noticed (the max and min thermometers are not set up) 72 F.

Saturday July 21: Very heavy rain for a few minutes before 5:50 this morning. Cloudy and threatening all day after that, but no rain. SE continues.

Collected down the slopes to Gladstone's claim for 17 numbers. Some interesting things, including a white-flowered Proteaceous tree with broad leaves and a canopy tree with curious large 3-angled dehiscent fruits with winged seeds. A rather common climber *Medinilla* in the oak forest zone recalls the fine species of the Solomons, but the flowers are solitary or in very few-flowered racemes. Collected my third *Cyathea* for the island - a very abundant big tree-fern of the second growths.

Two species of *Rattus* in traps 4 specimens) and, two *Macroglossus* netted, two *Pteropus* jacked, 1 *Petaurus* jacked and two brought in by natives of Boyu village, who came to camp with fresh food (sweet potatoes, taitu, tomatoes, Chinese long beans and coconuts). The *Petaurus* much smaller than the animal we have been getting in the D'Entrecasteaux.

Rus has been more or less laid up for two days with a chest condition.

Had some geographical corrections from the Boyu men. The creek that heads near here and entered the sea at their village is the Enumuruta (not the Ara or St. Patrick's Creek). The head of the Ara on which we are camped is called the Gagum.

The Misima people have the reputation of being fresh. The few we have met have been most cordial, and, withal, respectful. They are the cleanest native people I have seen. Bright of skin, clean of cloth.

Sunday July 22: Threatening rain most of the day; heavy shower about 4 pm. Cloud on Mt. Sisa, above us, after the rain.

Botanized near the mine again, mainly to collect the local oak, then went down to the Ara and followed it up to Gladstone's old battery sight. Only about a dozen species today. The oak, with long acorns, the most interesting.

Two more *Macroglossus* in the bat net down the road. Two gray *Hipposideros*, new to the collection, taken by Rus from an old tunnel near Gladstone's claim. Prize of the day was a small rodent, which reminds me of *Pogonomelomys*, trapped in the old clearing where George Brett used to live. A very good thing. Could well be a new genus. This makes 10 species for the island to date (collected by us). Not bad going for less than a week in the island.

Were visited in the afternoon by Mr. and Mrs. Gladstone and young Jim, and Ian McCollum. Very pleasant and interesting people. Dick likes to talk about the war in New Guinea, in which he served on Australian small ships. He also knows the Coen and Wenlock (Batavia River) mining areas in the Cape York Peninsula.

Lionel to Bwagaoia to spend Sunday, and tomorrow to examine the coast west towards Quartz Mountain for a lowland camp site.

Monday July 23 Very heavy showers made a tremendous noise on the tin roof between 2:30 and after daylight. Overcast and at times on the mountain, misty, after thaa, but only a few small showers. Field work handicapped.

Went down the road to a little beyond Grassy Knob (1000 ft.) and collected 16 numbers. Nothing of special interest. Mostly pot-boilers from the roadside but my 4th *Cyathea* for the island collected.

Spare boys out after *Pogonomys*, but no success. I rather doubt if it is here, despite native reports. Natives have to be very carefully questioned to get right in-







formation. Two bristly *Rattus* in traps, a big cuscus (*P. orientalis*) shot by Liklik. Rus considerably improved.

Tuesday July 24: No rain last night. Was driven back from the field by a long, heavy shower beginning about 10 o'clock. Afternoon overcast; occasional short bursts of sunshine.

Expecting good hunting, this morning I followed the track which has been cut to the top of Mt. Sisa above camp. Had a report of good forest up there. All I found was a great tangle of *Gleichenia* (called WEL) and other ferns with a few regrowth trees growing out of it. A few primary trees ~~left~~ left scattered on the narrow mountain crest. Great damage here by the hurricane of a few years ago.

Lost an hour on the mountain, then followed the cut track down the NW slopes towards the Ara. Was picking up a sprinkling of sub-canopy trees, etc., when the rain started. Collected my third species of ~~xxxxx~~ *Symplocos* for the mountain; did not expect three species of such a small group, and I don't have that number for any other genus from here except *Selaginella*.

Nothing in traps last night; no jacking. Boys again searched unsuccessfully today for *Pogonomys*.

While I was out this morning a native arrived with an aluminum billycan containing a dozen good eggs, a small bunch of bananas, and a few mandarins. Accompanying was a letter in fairly good English from Jean Grant, a half- or quarter-caste who is married to Sigua, the old man who showed us the tracks, and who lives with her brother, John Grant, at Panagamaora, on the foothills behind Bwagaia. She requested cash for the eggs, tobacco for the fruit. Sent her 5/- and three sticks. Nice of her to send fresh food such a long way. We seldom taste eggs. Egg powder I ordered specially upon arrival in the country in March has not arrived from Australia.

Wednesday July 25: Another rainless night; a few small showers during the generally overcast day. Have had very little sun this week. Mammal specimens are beginning to mold on the pinning boards.

Unwell with diarrhoea yesterday and today; so stayed in camp and dosed myself with diodoquin. Boys collected about a dozen species down the sloped past Brett's old camp. They collected the first *Freycinetia* of four species seen on the island; the butterfly boy brought in another. Have seen only *Pandanus* spp. - the dwarf already collected, and a big one which is sterile. Only two palms seen - the black palm (*Caryota*) and a small one, with unripe fruits, in the oak forest. *Calamus* appears to be absent.

Five *Macroglossus* in the bat net down the road; a *Petaurus* jacked by Rus. Nothing in traps.

Lionel returned from the coast in the middle of the morning. He has chosen a site for a lowland camp at Narian village at the mouth of Cooktown Creek. About 4 miles by road west of Bwagaia. Coral limestone country; forest up Cooktown Creek. A doubtful place for plants but it should be good for mammals, especially bats in the caves and the old mine workings of nearby Quartz Mountain. Government truck has been returned to running condition and is available to transport us from Bwagaia. Lionel spoke on the radiophone with the Catholic Mission at Nivani (near Sudest). They will probably be able to transport us across to Rossel. He also spoke with Ron Osborne of Rossel, who offers to take us across to Woodlark from Rossel.

Thursday July 26: The wettest 24 hours we have had at this camp. Very heavy rain off and on from 11:30 last night to 5:30 this am. Light rain kept us in camp until 8; heavy intermittent showers began at 12:30 pm. SE weather.

Collected down Ara Creek for a distance of probably a mile from where the track goes down the hill. Good bag of twenty numbers, but they took hunting for and I was 4½ hours in the field. Included were *Buchanania*, 2 *Lycopodium* spp. (making 4 collected here so far, and *L. cerium* has still to be gathered), and a very big robust *Selaginella* (4th sp.) from the sandy banks of the creek.

No less than six *Macroglossus* in the net down the trail towards the lake mine; a *Dobsonia* in the net down the main road. Tinker, out unsuccessfully for pigeons for the pot, shot a *Pteropus*.







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Rus and his two boys left for Kulumalia some time late in the morning to hunt bats in the mine tunnels; Lionel with them. Lionel returning this evening, reports about 60 bats of 4 spp. taken, including Hipposideros diadema and a small golden Hipposideros also new to the collection. This makes 13 spp. of mammals for the camp.

Wet weather is affecting the health of the boys. Tubuga still sick with fever and a cold; Galuwine half sick this afternoon. I still have symptoms of dysentery.

A native from Boiu village this am with two fish, bought for two sticks of tobacco.

Friday July 27: Steady light rain much of last night. Overcast and at times misty today until about 12:30 when showers began again. Rainy, squally night. Really rotten weather.

Botanized down towards Boiu village, following a formerly much used old path ~~which~~ which in a few minutes entered good forest undamaged by the cyclone. Track followed the crest of a ridge. Gentle slope most of the way (about  $\frac{1}{2}$  hour walk back to the road). Bulk of the forest characterized and in parts dominated by the winged dipterocarp ~~known~~ known as RUL. Places on the ridge crest along the path were quite open, as if travelers rested there. In one place I saw the remains of an old native shelter. No traces of fire elsewhere. The open places puzzling to me. Saw an old boy's meat tin, and a new packet in which a brand of German safety blades had been packed. First part of the track clayey and slippery after the rains. Farther down one walked on numerous surface roots which give poor footing. Dense undergrowth of young or low Freycinetia and a delicate Selaginella along the path in the dipterocarp forest. Interesting big trees were a Schizomeria and what appears to be a Metrosideros with very hard dark wood.

Had Galuwina and Sipoma work the head of the Ara Creek for crustaceans, partly for specimens, partly for food. Catch poor (perhaps better to hunt at night with a light), but we have at least two species in pickle. Common large-nippered sort, and a much smaller one with a broad pale stripe down the back.

Rus returned from Kulumalia sometime during the morning. His take in the mine was 62 bats of 4 spp. (Hipposideros 3, Rhinolophus 1). He has pickled about half the catch. Skinned out half of the remainder today. Has the rest in Gladstone's ice box for treatment tomorrow.

Woke this morning to find I had recovered from my diarrheal complaint; was on diodoquin for two days at 4 tabs a day.

Saturday July 28: The worst weather yet for this camp; mist all day; no sign of the sun; a thunderstorm from east late in the morning brought heavy squally rain; light drizzle much of the time.

Botanized down the road in the mist to a short distance past the Unura turnoff; sheltered from the thunderstorm under sheets of galvanized iron on the turnoff. Plants mostly common roadside things. Included, however, were a Podocarpus frequent as a canopy tree in the rainforest, and a small creeping Selaginella.

Traps last night yielded a young specimen of the Pogonomelomys?; one of the two bat nets the first Nyctimene geminus for the island. There is a big size difference in the Rhinolophus taken from the Kulumalia mine, indicating perhaps two species. If this is so, we now have 15 mammal species for the island.

Rus (rather late) has a lamp under drying racks for his mammal skins. Nothing will dry this weather without heat. Clothing washed at the beginning of the week still is not dry. Trampled clayey ground at camp is terribly slushy (a good inch deep.)

Sunday July 29: Big change for the better in the weather. Bright early morning.

Mist off and on; a few light showers; but short spells of sunshine, too. Weather still SE.

Working on materials on hand (drying and packing plants and insects). Sent the boys yesterday afternoon to cut down a big tree on which, on my first day in the field here, I saw an epiphytic Vaccinium in flower. Failing to down the big hard-wooded yesterday they finished the job today. Photographed a very pretty Freycinetia collected some days ago - it had been lying in the rain ever since.







Nothing in traps. Another Nyctimene and two or three Macroglossus in the bat nets. Russ still pinning and labelling the bats collected Thursday in the Kulumalia Mine.

All boys gave at least half day off. They have had a hard time during the past week. My boys had to finish their tree cutting. The mammal boys were sent out with the game-getter and some .22 shells to shoot a very slender blue-tailed skink common on the paths and in other open places.

Plant collection for the camp: 211 numbers including 24 bryophytes, 1115 herbarium sheets of specimens. The locality is worked out botanically for everything within reasonable walking distance of camp. Collecting in the primary forest of the ridges has been excellent, many trees, etc. being in flower or fruit or both. The ravines have not been so productive. The flora poorer there, and no doubt it has been much interfered with, if not reduced, by alluvial mining operations over a long term of years on Ara or St. Patrick's Creek. A dipterocarp community is recognizable in the rain forest of the ridges. Oaks and Castanopsis form characteristic mid-mountain forest on the yellow-clayey points of the ridges, surrounded by the mixed rain forest. Ferns rather than woody second growths occupy the extensive slopes which been face-worked for gold.

The weather has been against the collection of day-flying insects; only one night could be called good for the light trap. So far in this trip we have had only one real swarm night for insects. That was in the mountains of Fergusson Island. More herps have been collected here than at any camp since Waikaiuna (about 4 spp. of snakes, several of skinks, one or more geckoes, and quite a number of frogs.

Monday July 30: A sharp shower and much heavy kind during the night. Very windy (SE) again today, and a good deal of overcast, but also some sun. No rain. The ground in camp is beginning to dry. Our week's accumulation of washing was brought in dry this afternoon. Whitecaps showing on the sea off the Boiu coast, below camp.

Boys, working in three relays, made short work of moving the cargo down to Grassy Point this morning. There remain this afternoon only Russ' mammal boxes, our beds, and cook's gear to carry down. Dick Gladstone promises to be at Grassy Point with his tractor and trailer at 8 tomorrow morning.

Worked on a ten-weeks store order to send to Buntings. This will see out our work in the Louisiades. Will try to have cargo delivered on Sedent about the end of August.

Boys, in high spirits, staged a mock raid on camp as they returned from carrying. Decorated with green leaves and ferns; carried wild ginger spears.



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Tuesday July 31: Wind and heavy showers through much of the night. A few showers during the morning did not inconvenience our move down to the coast. Left Grassy Point in two trips of the tractor and trailer as far as Umuna turnoff. That part of the road very greasy. Wheels of the tractor locked in places and the whole outfit slid for yards.

Called in at the Gladstone's place for tea and arrived in Bwagaoia about 11 o'clock. Put all our belongings in the government bulk store on the beach. Was invited to stay with John Hart McLeod, A.D.O., who returned to the station from patrol a few days ago. Rus staying with Ian McCollum, Lionel with Bruce Teague. Heavy squally weather during the afternoon. Only scuds of rain.

McLeod a well set-up man of about 45, who looks ten years older. His wife and two children (5½ years and 7 months) due here from Australia within a fortnight. Has been 20 years in the service, first in the Mandated Territory where he had his first experience and training under Taylor. Recently had long furlough. Visited Hongkong. Talks interestingly of conditions there. Great quantities ~~there~~ of American goods being landed by American ships, then going on to Red China in British bottoms. People of Hongkong have little respect for America. Chinese particularly bitter because of the A-bomb being dropped on Japan; this considered unnecessary, and an atrocity against Asiatics, as Asiatics and an inferior people in the eyes of Americans and other whites. Shanghai merchants (Chinese) who fled when the Reds advanced, and managed to get their assets out, are rapidly taking over big business in Hongkong and squeezing out the old-established British firms. Opinion is that in about five years Britain will be ready to get out and leave Hongkong to the Chinese, which will mean the red Chinese. The Reds don't want it now; that would mean the end of the subterfuge on American goods. Chang Kai Check thoroughly discredited; considered nothing better than a leader of bandit war lords. McLeod considers that most Chinese business men would stay on under the Reds. They would lose their businesses and perhaps their fortunes, but their ability and experience would command good jobs with the new government. The Reds have cleaned up Shanghai, formerly regarded as a great vice center of the Orient. The great number of prostitutes have been put through rehabilitation centres to prepare them for a working life. Opinion is that when Hongkong goes, Manila will take the place as a free port; an area of land said to have been set aside for the purpose. The Philipinos are governing their country under American direction; American officials take a direct hand ~~with~~ when they consider it necessary. McLeod probably a bit anti-American.

Wednesday August 1: McLeod offered the old government truck to transport us out to our new camp, but was afraid it might break down. Dick Gladstone therefore took us out with his tractor and trailer. Followed an old motor road (in part an old railway bed) which went from Bwagaoia to Quartz Mountain, and in three miles or better came to the mouth of Cooktown Creek, where we started to put up camp. Good site on high alluvial bank of the creek, protected from wind and rain by young coconuts and a few young Canarium nut (KINAI) trees. A couple of hundred yards in from the coast, here an abrupt old coral reef exposed to the SE. A bold headland of coral limestone, 100 ft. or more high, on the west side of the creek. Other headlands towards Bwagaoia, and went along the coast. Road in one place is carried through a coral ridge in a tunnel at least 100 yards long. The railway used to run through this tunnel. Good gardens on the roadside. Rough coral ground for the most part; crops mainly bananas and yams, the latter now being dug. Many papayas eaten by fruit bats. Only second growth rain forest seen, and young growths at that. The locality does not look promising for plants.

Some further information on Sudest obtained from McLeod, who once walked across the island from somewhere near Griffin Point, the former chief port and chief center ~~across the island~~ of gold mining. He has offered us for use as a base a patrol post at Griffin Point.

Thursday August 2: No rain last night, none today. Our first rainless 24 hours in a long time. SE wind considerably moderated; did not start to blow until about 8 o'clock in the morning.

~~tent~~ All hands completing the rigging of camp. A very comfortable set-up. Lionel and I have a







All hands completing the rigging of camp. A very comfortable set-up. Lionel and I have a tent each. Rus is living in the rest house about  $\frac{1}{4}$  mile along the coast to

the east, at Narian village. Natives bringing in small quantities of sweet potatoes, very good bananas, papaws, and Kinai (Canarium) nuts. The latter good eating. Shaped like an almond and about an inch long; cotyledons convolute. The VC named Totewana, a distinguished looking gray-headed, toothless man with aquiline features. This afternoon we were visited by the two councillors of the village. They and the VC had been summoned to Bwagadia by McLeod and told to help us in every way.

US mails in today. They had come from Samarai on Eric Ryan's boat, which, owing to the bad SE weather was 6 days on the way. One of my letters was from Robert P. Celarier, of Oklahoma A & M, asking for seeds of *Andropogoneae* for work in experimental taxonomy in connection with their pasture improvement program.

Ian McCollum, cadet patrol officer, has been given permission to spend most of his time with us. He is at loggerheads with Patrol Officer Bruce Teague, who seems to be a bit of a bastard. Ian came out on a bike early this morning and returned some time in the night after jacking with Rus.

Lionel and I to dinner with Alec Thompson, who lives about a mile past us to the west or northwest. In living with a Misima native woman Niaomi, by whom he has an 18-month old son, Eric, who has been legally adopted as his son. Has a comfortable house high on a ridge  $\frac{1}{4}$  of a mile or so back from the coast. Owns (99 year lease) 514 acres of land. Over 200 acres planted to young coconuts; rest will be planted. Has a trade store at his house and another on the coast nearby. Also sluicing gold. Showed us 50 pounds of amalgam, and some good small nuggets. Gold is worth 15 pounds a fine ounce, plus a bonus of 30/- an ounce for small producers who get less than 500 ounces a year.

Friday August 3: No rain again last night or today. Wind southerly and somewhat moderated. It blew strongly before daylight.

Collected up Cooktown a mile or better for 23 numbers of plants. A few species of the primary forest, left as relics after the clearing and cultivation of the land by the natives. Only poor low second growths seen. A lot of sago in the narrow valley of the creek. Good travel on the creek; crossed and recrossed many times; gravelly bottom; occasional rocky banks on which *Begonia* and *Elatostema*? grew in abundance. Interesting plants were a *Barringtonia* (TABTAL, SAWA) said to have edible seeds (flowers, yellow), a *Terminalia* with small leaves and angled dry fruits, and what seems to be a mango (I did not see fruits; the flowers different from those of the cultivated species).

Two *Rattus ruber* in traps; a *MacroGLOSSUS* in the one bat net set; two *Pteropus* shot last night by Rus.

Camp rigging completed in the morning. Insect collecting begun by Galuwina. I had a fair catch of moths, etc. at the light trap last night.

Ian says that on the Tweed River in Queensland they plant grain sorghum to rid the soil of nematodes which infest beet crops. All cereals said to be useful for this purpose. It should be worth trying in Florida.

Saturday August 4: Another fine night and day. Heavy wind through the 24 hours, from SW. Threat of showers. Very high thin mackerel clouds drifting from north.

Kept to the limestone of the coast this morning and collected 20 numbers. Except for a small sandy and gravelly cove at the mouth of Cooktown (or SAWAIA) Creek, all the coast is of coral limestone. The foreshores are a flat old reef with not much low shrubby and herbaceous growth on it. The headlands between bays rise to perhaps 100 feet hereabouts, and have been cleared and gardened. Some interesting plants survive on the low



1. The first of these is the fact that the majority of the population of the United States is of European descent. This is a fact which is well known to all who are familiar with the country. It is a fact which is well known to all who are familiar with the country. It is a fact which is well known to all who are familiar with the country.



foreshores and the cliffs. Among them a fine Boea of rosette habit of which I am trying to collect seeds for the Bailey Hortorium of Cornell. A Passiflora has white flowers which turn reddish. There is a small Ficus of espelier habit. Ian McCollum with me.

Two Rattus ruber in traps; a silasila shot last night by Rus, a MacroGLOSSUS by Kim, and another of these bats was caught in the net.

Were visited after lunch by Bruce Teague and Dex Fitzer, who drove out from Bwagaia in the wreck of a government truck. Bill Griffin was another passenger. The three of them, with Lionel, accompanied Rus to Kebu-bwa Cave, just just the other side of Coppard's plantation. Only Rus, Lionel and Des entered the cave. Very big with several branches and one chamber said to be 50 ft. high. Water in the cave prevented them reaching the coast (The cave is about 300 yards long and ends at the salt water). Twelve Miniopteris caught in the cave. Red Hipposideros and perhaps Dobsonia (Rousettus?) also seen. Many bats. Rus went on to Bwagaia, shot two more Miniopteris there, and spent the night with McCollum.

Sunday August 5: Another rainless 24 hours; threat of rain in early morning. Wind much moderated; now from about south. The air always feels cool here as soon as the sun goes down. Heat of the day not oppressive, as it was at Waikaiuna and Iamelele.

Botanized (Ian with me again) along the coast as far as Thompson's trade store at the mouth of Buanitura Creek, thence inland by motorroad to Thompson's ~~trade store~~ house, where we had cold water and "6-mile" Raspberry drink (all soft drinks are "lolly water" out here), then along the motor road back to camp. Camp about a mile from Thompson's house, perhaps 2 miles from the mouth of Bwanitum Creek. Some good plants included a showy Bikkia, a fleshy composite, etc. of the coral limestone foreshore.

Had as visitors Bruce Teague and Ian. The former stayed for dinner and left about 8:30 for Bwagaia.

Monday August 6: Slight shower at 6am; threatening morning; rain began in light showers about 10 o'clock; steady hard rain from about 11 through the afternoon; very strong, squally southeaster with the rain.

Worked the limestone cliffs about the mission and continued on through Coppard's coconut plantation for about 15 plants. Very little except on the limestone, which has yielded many interesting plants in the last three days. The second growth rain forest of the coast is singularly poor in species; comprised mainly of Kleinhovia hospita. Am not sure that I have seen Macarenna at all.

Rus, Lionel, Ian and three boys to a big cave about 1-1½ miles up a creek from Ehaus. Long walk estimated at 11 miles there and back. According to me on (sic) the Narian councilors I talked with a day or so ago, the Ehaus caves are called Kuiaba. Well developed caves on three levels; water inside the middle level, also stalactite and stalagmites. Another system above this, and one at a lower level. A great many bats in the middle-level cave, which alone was entered. Five spp. collected, including a big Miniopteris or Hipposideros new to the collection. H. diadema there. Much wading in the creek (described as about 20 foot stream, gravelly, in primary forest) between Ehaus and the caves. Rus and Ian tired and wet when they returned to camp at 3 o'clock. The Narian VC acted as guide and a number of Ehaus people joined the party and went into the cave. No Dobsonia or Rousettus seen. Thirty-four bats collected. Only two of the strange species gave entrance about 20 feet above level of the creek. Creek, like all I have seen on the island, has a very easy gradient.

An old stone mortar, of rough exterior but perfect obconical interior, described by Rus and Lionel as seen in Ehaus village. Neither made any attempt to buy it. The locals did not know anything about the mortar. Said it belonged to the long before. Lionel mentioned the occurrence of stone pestles and perhaps mortars on Fergusson Island; he saw them about two years ago.



[illegible]



Tuesday August 7: Rain stopped about 5 last evening and there has been none since, to dusk this evening. Light southeaster blowing.

Botanized up Inhabit Creek from Thompson's house. Easy going as far as I went - about  $\frac{1}{4}$  mile, but only one previously uncollected plant found (*Myristica* 27648). Turned back, then followed the old motor road up Quartz Mountain for  $\frac{1}{2}$  to  $\frac{3}{4}$  mile. Only one good plant, fragrant *Fagraea* 27651, found there, but I collected a few second growth things, including a *Macaranga*, which was not common. *Hibiscus tilaiceous* abundant in the second growths with *Kleinhovia*. At my highest point, at perhaps 300-400 feet, I was behind the first ridge of the mountain in territory which was protected from the cyclone of 1952 (April). Good tall forest there, but much overrun with vines along the road. Inhabit, the name of the creek, is puzzling. Perhaps corrupted pronunciation of In-ha-bit. Recent working for alluvial gold.

Nothing in traps, nothing shot last night. Rus and his boys busy on yesterday's bats.

Ian with us again today. He was to have packed in preparation for a shift back to Samarai, but instructions came by radio conversation yesterday for him to remain at Bwagaia and for Bruce Teague to go to Samarai. Ian at loggerheads with Teague; feels he has had a win. A very immature young man (20 years). The govt. trawler Manuguna due tomorrow from Samarai. Ian actually is attached officially to the expedition (nothing for him to do, or nothing he can do, in the office at Bwagaia). Teague is only 23; has been ordered to administration school in Sydney next February. One year course now (School of Pacific Administration) used to be two. The present Liberal (actually Conservative) government in Australia is cutting down as much as it dares on measures introduced by the late Labor (actually in part the Progressive) federal government. The native cooperatives, started by the labor government, are being allowed to carry on. Feeling in trade circles is strongly against the co-ops. within the last year or two a coop system has been ~~instat~~ established in the Misima sub-district. Several stores on Misima. Others in the Calvados Chain. Some soon to be started on Sudest. Capitalization for the whole scheme was initially 6000 pounds. A boat to run coop cargo (the Liliwasa or Liliwasu) was bought for 9000 pounds. A call has gone out for another 6000 pounds of capital. It is felt no trouble will be experienced in raising it. Store prices, coop and private, are lower on Misima than around Samarai, freight differential notwithstanding. An 18 inch knife can be bought in the local coop store for 14/6; the same article would cost us 18/6 at Buntings in Samarai. The coops actually are run by white men under a Registrar of Cooperatives in Port Moresby. Government pays the salaries of the white officers (Des Fitzer) is stationed on Misima; lives on the Liliwasu; and apparently keeps a close eye on everything. There is a district or regional co-op manager (Les Simpson) in Samarai. Co-ops in Milne Bay are reported to be doing very well. with no longer much white supervision (Other reports differ on this).

Wednesday August 8: Another fine 24 hours; wind moderate SE; considerable cloudiness; sun also felt hot in the open, away from forest shelter.

Rus, Lionel, Ian and self to the old gold mine on Quartz Mountain, about 2 miles from here by road. Were driven there by Alec Thompson in his land rover. Self to botanize higher on the mountain, they to hunt bats in an old drive. End of road said to be 400 feet above sea level; mine 50-100 feet higher. I followed an overgrown old track perhaps a couple of hundred feet up the slopes from the end of the road to the crest of a ridge of the ridge where a former timber river cut across the mine. This ridge crest was struck hard where formerly timber was cut for the mine. This ridge crest was struck hard by the cyclone, which did very little damage at the mine -- at least to vegetation. Collected in all about a dozen numbers, mostly trees, including a good *Myristica* and a *Calophyllum*, also an *Elacocarpus* with big white flowers and big blue fruits. Had lunch at the old workshop of the mine, about the only building still standing. The mine was abandoned after the cyclone of 1952, the heavy rains of which ~~continued~~ caused the mountain side above the battery to creep. The cost of digging this out or moving the battery must have been considered more than the mine was worth. Owned by a New Zealand Company, which







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went into liquidation and sold all assets here to Alec Thompson, whose father was general manager. Also has been selling the machinery. A lot of it still at the mine. Later. Learn that the name is Alexander MacArthur Thomson. Ridge crest I was on is 500 feet sea level.

Out of the mine this morning Rus took two species of bats, a Hipposideros and a Rhinolophus, the latter collected once before on the island and now believed to be a new addition to the collection. This probably makes 17 species collected by us on Misima. Some of the so-called Rhinolophus and Hipposideros might belong to other genera. Rus knows little about the mammal fauna, although he had a month in which to prepare for the trip.

A big day for visitors. All four government officers here this afternoon: McLeod, Teague, Fitzer, and McCollum. Teague and Thomson, plus Ian, here for dinner.

Thursday August 9: Strong wind and a few light showers in pre-dawn. Same through day but less rain. SE weather. High seas breaking on the shore reef this afternoon. The government vessel Managuma, with Mrs. McLeod and two small children, and Cottrell-Dormer on board, reported to be sheltering at Tubetubein the Engineer Group, en route Samarai to Misima.

Yesterday's social responsibilities kept me from preparing yesterday's plant collection. Had to do it this morning. Then went up the hill behind Narian (used to be Lapipai) village and camp to a scattered hamlet of six houses called Leuna. Only interesting plants were Calophyllum inophyllum, growing a hundred feet or more above the sea, a climbing Lygodium, and a yellow Portulacca collected in the village (not P. olearacea; very small flowers). Sent the boys out in the afternoon and they brought in only four numbers including Dendrobium undulatum vol. aff., and a ground orchid.

Rus and Ian to Kulumalia via Bwagaia to look at the mine again for bats. Observed the ratio of small sp. to big sp. Hipposideros - 9-1, one way or the other.

Bill Griffin visited camp in afternoon, accompanied by three schoolboys (who brought a Pacific boa), and stayed for dinner. Later: Bill's name is Grafen (of German descent).

Friday August 10: Some showers and much wind last night. Wind and high seas this AM; much moderated this evening. The last two days have been hotter than usual.

Spent this morning on an excursion to a neighborhood called Tutubia, just this side of Bwagaia, inland under the mountains, where the half castes live. Some Melaleuca savanna there; also a hundred acres or so of open grassland which may have been savanna originally. Rather heavy soil carrying fragments of white quartz. Grasses of the savanna and open grass area much eaten by the government milch herd; seems to be Themeda triandra? principally; one area of very soft short cropped bluish grass probable Eulalia; Imperata all through the area. Collected 8-10 associated herbs including Phynchospora rubra; Rume Bimelea Euphorbia, Houstonia?, a small white-flowered Broweria?, and a Hypoxis with very short peduncle. Flora as on the Fergusson grasslands except for Eulalia, a small Sataria, the Hypoxis and Broweria?. The Melaleuca appears to be the same form, although on Fergusson it is rather slender and very crooked whereas here it grows into a rather straight thick-boled tree up to 40-50 cm. in diameter.

One Rattus ruber caught in traps, by Kim, last night. Jacking yielded nothing. A reputed cave near camp turned out, upon examination by Rus and Lionel, to be too short and light to hold bats.

McLeod visited camp in the afternoon. Worried about his wife and family. No one seems to know just where Managuna is at the moment. Thomson here for dinner. A very social camp. Too much so. Thomson served with the New Zealand infantry in Italy in the last war.



vent into inspection and sold all assets here to the Thompsons. The Thompsons, who were in the area, also had been selling the merchandise. A lot of it was sold at the mine. The Thompsons had the name of the Thompsons. The Thompsons had a lot of goods on a lot of goods.

One of the mine's main thing was two species of birds, a Thompson's and a Thompson's. The birds were collected once before on the island and now believed to be a new addition to the collection. The Thompsons had a lot of goods on a lot of goods. The Thompsons had a lot of goods on a lot of goods.

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Saturday August 11: No rain in the 24 hours. Wind round to more east than SE. Seas moderate.

Went west along the coast a good three miles, to a village near Ehaus. Thomson picked me up in camp and dropped me at his trade store at the mouth of Tauhik Creek. on the outward journey. I walked back along the coast. Rough going on the coral fore-shore. Road in several places ~~crosses~~ skirts the water under cliffs and spray even with a moderate sea and low tide goes over the road. The limestone eroded into miniature fjords only a few feet across, spanned by log bridges. Got enough plants to bring my total for the camp up to 140 numbers and total for the island to 551 (including 28 bryophytes). About 3½ weeks of field work. Mainland local ties would have yielded much more in the time.

A couple of Pteropus, 2 macroglossus, 2 Rattus ruber and a big spiny brown rat (first for this camp) taken last night.

The three of us and Ian McCollum to Thomson's place for dinner and native dancing. Dancing and singing much influenced by the stifling hand of the Methodist Mission. Our Gosiagos put on the best part of the show. Rather pathetic to see Alex trying to get into the good books of the natives from amongst whom he has taken his woman (a Narian girl). Unless he breaks away soon, his life will be ruined. He does not fit in native company. Father a barrister at Dunedin, New Zealand. Alex had a white wife from whom he was divorced several years ago; she lived with him at Quartz Mountain.

Sunday August 12: Another rainless 24 hours. Wind light and variable; mostly from about east.

Drying plants and packing insects for shipment to Samarai. Boys collected some good looking seeds of the Boea of the coral limestone which I will post to Moore at the Bailey Nortorium.

Lionel to Bwagaia with Eric Thomson to meet the Muniara. They carried last night's party to daylight this morning and all through the day.

Traps were picked up today. Total mammals for the camp 231 of 17 species. The collection very strong in bats, weak in rodents.

Were visited at dusk by the Tongan lady whose husband (now visiting Rossel) is in charge of the Methodist Mission about a mile to the east of us, at Gaibobo. Dignified woman of early middle age; much charm and fineness. Has been on Misima since 1936, with one or more visits to Tonga. Her missionary husband and the native chief clerk ~~was~~ of the government office at Bwagaia administered Misima all through the war after white personnel were evacuated.

Sunday August 13: Showery from approximately SE; wind moderate.

Alex Thomson, driving the old 1½ ton Dodge truck, and Lionel driving Alex' land Rover, transported us from the Cooktown Creek camp to Bwagaia, where we arrived at 9:15. Paid 5 pounds for the service gear loaded directly on to Eric Ryan's "Titan", on which we are to start for Sudest some time tomorrow.

Am leaving with the ADO, Bwagaia, for forwarding to Samarai, nine herbarium bundles and one carton of plant material, and a black box insects and plant specimens. Rus's specimens do not fill a knockdown box, so he is carrying them on to Sudest.

Had lunch with Mr. and Mrs. McLeod. Latter very Australian in accent. Is working on a book dealing with her experiences in New Guinea. (8 years at Kairuku, Mindi and Misima.) A thick Ms which was written two years ago and has yet to be finished. McLeod pretty well drunk on beer which came on yesterday's boat. Misima is seriously a drinking island.







Tuesday August 14: A heavy rain squall from the SE delayed our departure from Bwagasoia until 8:40 AM. Eric is not a seaman and is rather timid about his boat. The "Titan" is a 40-footer sloop rigged (she at least carries a jib), and has a new 40 h.p. Ailsa Craig engine. One bunk in the wheelhouse aft; no accommodation for passengers. Ryan uses her as a trading boat, picking up copra and shell, and selling manufactured goods. Has a big stock of trade on board this trip.

Had a rather rough voyage on the open water past the Renard Islands and until we passed through the barrier reef of the Calvades Shain. This was at 1:30. At 2:25 stopped at the big island of Pana-Wina to set down a native passenger at Bunting's coconut plantation. At 4:05 anchored at small Nigahau Island to trade. I went ashore. Some goods sold for cash and bags left to be filled with copra which Eric will pick up on his return journey. Very clean village with about 20 houses. Houses quite big as a rule. A government resthouse and a new RC church, the latter still unfinished. The mission has a native woman teacher here. The resthouse used as a school. Several big built-up canoes on the beach; painted white. A number of Japanese green glass fishing floats in the village. Left Nigahau at 4:45 and anchored for the night at Grassy (or Wanim) island. Slept in the government resthouse on NW end of the island. Sandflies bad; big old megapode mound at resthouse; megapode calling at night.

Wednesday August 15: Left Grassy Island 7:15 am. Village on north end of island, close to resthouse, has several old-style hog-backed houses. Gardens being and burned in relic bit of rain forest in gullies on the slopes. Passed along the south coast of big Pana-tinana or Joannet Island. Good forest cover on the west end of this island. All the islands of the Calvados Chain are hilly. Much grass on some of them; secondary condition following deforestation for cultivation. Looks like the dry season for these islands; numerous smokes from grass fires; many patches of newly burned grass. Reason for burning the grass not plain; there are no wallabies on the islands. Anchored to look for trade off a small village near Son-of-a-birth Point on Pana-tinana. A good bed of gold-lip pearl shell here, in 18 fathoms, and a number of lives have been lost in diving for it. Hence the name of the point, which seems to be Utana Point of the chart.

Anchored at Nimoa at 9:15; headquarters of the Catholic Mission in the Louisiades. Good building; very well kept. Father Twomey, the one priest stationed here, was away in Samarai. Brother King, very young, clean looking Australian from Laverton, Victoria, temporarily in charge. A convent, with three European sisters, whom we did not see. Big white statue of Christ on the cross, and a flower-bedecked grotto of the Virgin. Brother King offered us rum and water. We had morning tea with him - nut bread and pretty little cakes and iced cookies. Mission has electric light and a boat. About 170 boys and girls in the school, which is now out on holidays. Mission has big food gardens on Sudest, across a couple of miles of water to the south. Our call at the station was largely to arrange for cargo from Samarai to be dropped there for us, and for making an arrangement with the mission to forward our cargo to us in their boat.

Left Nimoa 10:45, passed Griffin Point at 12-25, anchored at Joe Landing at approximately 1:50. A good resthouse at Joe Landing (proper name, Inigallau), and from it a track crosses the island, close to Mt. Riu or Rattlesnake, the highest peak (2645 ft.) on the island. A village policeman, one Bom, here. Genial man of middle age and small stature, well covered with  $\gamma$  sipoma. Remembers the time when (about 1914 to 1915) one of the Eichhorns went in from Bowla village and spent a week on the mountain. According to Bom, Tommy Craig was with Eichhorn. Bowla village, perhaps 2-3 miles east along the coast, is no longer in existence, according to information received at the mission; a new village, Areda, has been built, about half-way between old Bowla and Joe Landing. Room enough in the resthouse for the three of us to live, for storage of all our gear and supplies, and for Rus and I (sic) to work.

Bad news on the radio that the scow "Kari", on which we traveled from Samarai to Bwagasoia, was wrecked about ten days ago on a reef in the Egum Group and is a total loss. Crew and passengers (2 Europeans included) were all picked up by the "muniera" on the







13th. The Kari was bound from Woodlark Is. to Samarai. Ours was probably the last trip she completed. A vessel inadequate for the job she was doing. her native skipper seemed competent but seemed to allow his crew to make decisions for him.

Thursday August 16: SE wind still blowing, but here on the lee shore of the island we are sheltered and get only a cooling breeze in the resthouse. Some cloud but no rain.

Boys rigged the drying units and made a work table of sago midribs and later joined me in botanizing west about  $\frac{1}{2}$  mile or so to the mouth of a small creek. Shore fringed with mangroves 20-60 ft. high: Rhinophora, Bruguiera, Avicennia, Carapa, Neritiera, etc. but not a mangrove seem fertile. The crab-boled and gray and clayey and containing much broken white quartz. Shingly gravel in creek apparently mainly shale. Entire-leaved white-flowered Acanthus forms thickets up to 2 m. high where rain forest joins the mangroves; Asplenium aff. nidus also growing in large ~~quantities~~ pale clumps on the muddy ground, where there was also a common tree-fern (Cyathea), and a hepatic on the ground. Some unusual occurrences for a subsaline habitat. A big Entada climbs to the tops of the trees in the ocotone.

The gray soil along the coast is dry and hard. Evidence of this being the dry season. Village rich - or infested by- pigs (usually spotted and of fair quality) which must foul the place badly in wet weather. Only a small village of eight houses including the resthouse. Our boys sleep on the ample porch of the house of the VC's younger brother. Front row of houses built right on the water's edge among tall coconut palms. Most of the villages seen on this coast are back from the mangrove coast and 100 feet or more from the sea on the frontal line of ridges. There is a gap in the mangrove fringe, a couple of hundred yards long, at Joe Landing. No sand flies or mosquitoes have attacked us here.

No traps set last night. No shooting; this to give a chance of a shot at a big crocodile said to be in the habit lately of crawling up under the houses during the night. This croc not afraid of the natives, and will not be hunted away by them. For several hours Eric (who decided to stay at anchor here to trade) and Lionel crocodile-hunted with dinghy and headlamp along the coast to a big creek about a mile to the east. They saw nothing. Tide perhaps too high, they thought. Alec shoots for their skins any crocodiles he comes across. An average skin worth about five pounds.

A little black-lipped shell dived for on the reefs here. Eric pays six pence a pound for it if of good quality. He also buys small quantities of the Sudest gum. This said to be gathered mostly by the women, who pick it from the bases of the trees or the ground below the trees.

There is on the gravelly beach a big new white-painted built-up canoe which I asked Bom about this evening. It was bought from Booker Island by a rich native who lives in the hills above us. (Like dim-dims, says Bom, some natives are rich and some poor). The price paid for this canoe was five pigs, 200 lbs. of sago, 20 baskets of native food, and 40 pounds in money. These people have trade with Booker Island and from the Bookers they buy or exchange cooking pots for sago and baskets which the women make. There is also trade with Tossel, the red coconut parrot (and perhaps other species) being traded for bagi (shell money). For a parrot the Sudest people can get a string of bagi worth up to about six pounds. Pigs also traded to Booker Island.

Lionel shot this afternoon four blue pigeons which provided us a really excellent meal of soup, breast steak and wings and legs. Mostly the cook overdoes fresh meat. This evening I gave him the ample leftovers to eat and savour (sic), so that we may hope for a repetition of this evening's success.

For some reason which I do not know and have not inquired into, the white traders, I am informed by Bom, are not interested in buying gold from the natives of the island. Gold is to be had "in plenty" says Bom. They can't sell it, so don't work the streams for it. All the traders for is copra, shell and gum. In Samarai I saw recently in the lii

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The first thing I noticed when I stepped out of the plane was a warm, humid air. The humidity was not sticky, but welcoming. I had heard that the humidity in the South was unbearable, but here it felt like a warm blanket. The humidity was just what I needed to melt away the stress of the long flight.

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Rom says the young men will carry is the weather is fine. The guide, however, will have to be the councillor from the inland village, who alone seems to know the way to the top of Riu.

Sunday August 19: A lot of strong SE wind during last night. Fine this AM until about 10 O'clock, when drizzles began, clearing late in the afternoon.

Lionel unable to get away again today. This is contributions Sunday for the Methodist Mission. Native adherents have gone to give money and garden truck to the Tongan head teacher, or whatever he is called, who lives at Rambuso and yesterday went to a village west a few miles along the coast to do the collection.

Worked inland up the track to a distance approaching two miles from the sea and altitude estimated at 150 meters. I omitted to record that a week ago today, "Drunken Sunday" in Bwagnolia, when the young government officers left for Samarai with 2 dozen beer and 11 bottles of rum for the two days voyage, Fitzer threw our aneroid into the salt water at the wharf. I still don't know how Fitzer came to have the instrument. No native would dive for it. So Lionel went down in 5-6 fathoms and brought it up. The aneroid is now on the way to Australia for reconditioning.

A good day for mammals. Nothing in traps. Two or three *Nyctimene* shot by Lionel last night; a big *Pteropus* by Rus. The spare boys, out this morning some distance in the primary forest (?) got a very different looking adult *Pogonomys* and a half-grown young one. Body short, tail long, and heavy, feet very big. Must be a new species. This evening Lionel shot a russet *Miniopterus* new to the collection, unless it is a color phase. This makes 8 species for the cam to date. Not bad for an area largely deforested.

Learned this morning of old gold mining tunnels in the lower mountains, made by Tom Morley before the last war. Rus went up to the inland village this afternoon to arrange for an excursion to the tunnels Tuesday. Two inland villages seen by me this AM. Visited only one, Erinamoia, where the Councillor lives, c. 1½ miles inland and at about 400 ft. Clean place of 15 mostly big houses.

Botanized mostly in relic strips of primary rain forest left in the gullies. Apparently a strong endemic element also a considerable number of species which I also collected on Misima (white-flowered *Protoaceae*, *Symplocos*, *Nepenthes mirabilis* (without mousey odor). Found on the grasslands a *Velleia* (*Goodenoviaceae*) a genus I have only once collected hitherto in the new Guinon - west of the Fly River. Picked up the fruit of a winged dipterocarp which I could not otherwise discover. Different from the tree of the Misima mountains (fruit much smaller).

Monday August 20: A scud of rain at dawn (5:45); others through the morning. No drizzle in afternoon; rus had his mammal trays on an outside drying rack.

Lionel at last has left for the mountains. Got away at 7:15 with 3 carriers, a spare to our track, and the councillor as guide. Probably he will strike wet weather above about 1500 feet. The SE continues, piling clouds on the mountains.

A backlog of plants which I did not have time to prepare yesterday, kept me in camp until nearly 8 O'clock. Then went along the coast, west, for rather better than 2 miles. Collected 17 numbers; some of them still on hand, as I have run out of driers. This seldom happens. Have averaged 16 numbers a day for the camp. Not bad for an area largely deforested and occupied by migrant grasses and associated herbs few in number. An unexpected find was an *Antidesma* (probably *A. ghaesedebrilla*) which I can't remember seeing this side of the Port Moresby Grasslands (it grew on the grassy edges of the mangroves).

Nothing in traps last night, although one or two new lines were in operation. Last night Rus jacked a *Dobsonia* and a small *Pteropus*. Six *Nyctimene* were caught in a net



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Monday August 1st A lot of ... about 10 ...

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set at a fruiting Jambosa tree within a few feet of the resthouse we live in. Tubuka and Sipoma brought in 5 Pogonomys cut from trees, and VC Bom contributed two more. This Pogonomys is a beast very different from those we got in the D'Entrecasteaux. Has a skull squarish on top, and three lines of cusps.

Our Gissiagos give evidence of being happy on Sudest. They have been singing for hours this evening.

Tuesday August 21: No rain in 24 hours. Mountains (Riu) clear till at least midday. Natives are burning the grass again after the rain.

Botanical project of the day was the collection of the tree from which the "gum" of the island is collected for export. Had VC Bom as guide. Came upon the trees in primary rain forest of the little valley of Vulcunitu stream, about two miles inland and altitude of 400-500 ft. Catica probably sapua, called Guimbur by the natives. This produces a reddish gum (so described by Bom) which is the chief product sold. A whitish gum (no doubt a resin) is obtained in small quantities from a dipterocarp with winged fruit, called Walei (said by Bom to be called Rul on Misima) which occurred abundantly in ridge forest further inland. This dipterocarp as plentiful or more so than any other tree in the forest of the ridges ~~forest further inland~~, which have only fair timber volume. A common larger tree is the Syzygium I collected on Sunday. The Vatica where I saw it was the commonest canopy but small (about 20-25 m tall x 30-40 cm dia.)

Rus, with a guide and two or three hangers-on from Erinamoia village, made a 7-hour excursion to a mine tunnel much farther S or SW said to have been made by one Manning. A sell dug tunnel, according to Rus, which went in a long way, but could not be entered far because of deep mud and water. Literally thousands of bats flew out when a shot was fired into the tunnel. All Miniopteris, but in two sizes and probably two species. About 50 collected with switches outside the tunnel.

Lionel returned from the mountains at noon - unexpectedly early. With good travel he reached a camp site in the forks of a fair-sized creek at an estimated 1000 feet, at the foot of Mt. Rattlesnake (or Riu) in 5 hours from Joe Landing. From there climbed nearly to the summit of the mountain, past Eichhorn's reputed camp site if 40 years ago. This took 2½ hours. No water near the Eichhorn site. A good second site for a camp on the track about 400-500 ft. above the creek, on the crest of a broad ridge. Mossy forest conditions not encountered anywhere. Description of the second camp site appears to indicate oak forest, and Tinker carried an acorn back in his pocket. Rather disappointed in the report. We will not be able to camp as high on the mountain as I had hoped. The summit area should be obtainable for baptizing from the second camp site. Altitudes are of course estimated, now that we have no aneroid.

Had my first sight of Riu from Erinamoia village on the way into the field this morning, and another view from a ½ mile or so further inland. It would be an exaggeration to call the peak a Matterhorn, but it is steep towards the summit and very limited in area. Viewed from about NW there is a side pinnacle a few hundred feet from the summit; Eichhorn said to have camped on the saddle between the pinnacle and the main peak.

Have sent out word for at least 55 carriers for early Thursday morning.

Two native sailing canoes from Grassy Island put in at dusk to spend the night at Joe Landing. Said to be on a sago-making expedition. Canoes each with 5-6 people on board (men, boys and women); rigged with a lug sail (European material).

Wednesday August 22: A lot of high thin overcast today, but no rain. Strong SE wind at times.

All busy with preparation for leaving for the mountains tomorrow. Joe Landing



at a distance of about 100 feet from the shore. The water was very shallow and the bottom was very soft. The fish were very small and the water was very clear. The fish were very small and the water was very clear.

Two glassfish give evidence of being kept in a tank. They have been kept in a tank for some time.

These are the fish which are kept in a tank. They are kept in a tank for some time.

Another object of the day was the collection of the fish which are kept in a tank. They are kept in a tank for some time.

Two fish were kept in a tank. They are kept in a tank for some time.

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has yielded me for 6 days 105 numbers of plants (7 of them bryophytes) and 605 sheets of specimens. A better collection than I expected from a locality largely deforested. The relic rain forests in gullies/ on slopes have yielded a good number of trees in flower or fruit. This has been the poorest camp yet for insects. Hardly anything most nights from light trap. Few butterflies and odonata, The best field has been in spiders. Eighty mammals taken of 10 spp.

For the second day in a row Lionel spent about an hour on the reef with his fish-line and a borrowed canoe. Another good meal of fish; the only one I know of four spp. being a red emperor.

For the second night we have been listening to U.S. Armed Forces radio reports on the GOP presidential convention in the Cow Hall, San Francisco. A lot of hoop-la so far, with indications of a fight coming up on Nixon for Vice-President.

There is probably a correlation between the scarcity of insects and small bats at Joe Landing. Only three insectivorous bats of two species were seen at dusk, and one, a Miniopterus, shot.

Thursday Aug. 23: Good, fine day though considerable high overcast. As usual when we are on the move the weather was fine but conditions not favorable for color pictures.

Left Joe Landing for Mt. Riu at 735 AM with 39 carrier loads. People in good fettle. Some came as far as Griffin Point last night, either to be in the show, for the pay, or perhaps because of word of our coming being spread by Mr. of Bw Bwagaia while on Patrol at the time of our arrival on Misima. Had with us, besides the carriers, 5 councillors & a village policeman. Crossed Vukunitu Creek at 9:30 (n the cannibal raiding days, at the time of the present elders' grandfathers, the Joe Landing people, returning from forays to the slopes of Mt. Riu & thereabouts, propped up their dead victims on a chain-like ledge of rock on the ridge of the creek, faces painted and looking back up the track, having a last look in the direction of their country.). From there a steady climb of perhaps 500 ft. to crest of the central divide of the island, reached at 9:40 after a 10 minute rest at the last water. Difficult to judge altitude; track in dense primary forest but altitude of crest perhaps 1500 ft. Travel up and down along the top. Rest of 15 minutes when the track began to descend rapidly to the valley of a fair-sized creek. Reached the creek at 11:05. Lionel camped here on his survey trip. Altitude estimated at 1000-12-- ft.. Creek called ESILAVA. Had tea and good hefty bully beef sandwiches with Lionel, who reached this spot half an hour before me. Then on up a nice spur ridge in the direction of Riu for 20 minutes slow walk to a alternate camp site selected by Lionel. Decided to camp there. Altitude perhaps 1400-15-- ft. Good site on a small knoll with a little stream of running water handy. This the last water found by Lionel in his recent trip. Altitude too low but the best we can do. Still in a rain forest. Saw no oaks or Castanafiss. ~~Think~~ Think Vitica in valley of the creek where Lionel camped. Changes take place in the forest but it is hard to define them as to recognize characteristic trees. Very little new in flower or fruit.

Cleared the camp site and this morning have a fly and the two tents rigged, plus a cookhouse roofed partly with bark and partly with palm leaf. Palms are scarce in Sudest except where there is sago. Carriers paid and went home about 20'clock; 6 p per load; 5/s cash for the councillors & VC.

Friday Aug. 41 Fine but considerably heavy cloud from about east. The wind at camp comes up valley from west.

Mt. Riu, on direction indicated by Lionel, lies 105° magnetic from Camp.

Camp rigging practically completed. In the general pattern of counts, we have one boy off duty with a swollen groin, as a result no doubt of yesterday's walk. Another boy with mild malaria - cooler climate.



has yielded as far as 100 numbers of plants (7 of these are ferns) and 100 species of animals. A better collection than I expected to find. The main forest is a forest of large trees with a good number of large trees. The forest has been cut down and the land is now used for agriculture. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees.

The second day in the forest was a day of forest. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees.

For the second night we have been sleeping in the forest. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees.

There is a correlation between the number of plants and animals. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees.

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Left the forest for the night at 10:00 PM. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees. The forest is now a forest of large trees with a good number of large trees.

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Gathered a few plants around camp. Made colored photographs of which a purple Hendrobium #27811, collected on the trail yesterday.

Were visited by three men from Hula village on IL S. coast. They want to work for us We might get carriers from the south coast for our return to Joe Landing.

No traps out last night. No jacking.

Saturday Aug. 25: A storm woke ke at 3 AM More rain at dawn & after; then for about an hour 1 - ? PM.

Nothing in the few traps set last night. Lionel and Rus out jacking for a while. Lionel fired some shots but got nothing. Two Pogonomys and 2 Petaurus cut by the mammal boys Lik-lik & Grubb.

Flowers kept me in camp until this morning when I set out for Mt. Riu. Followed the pig-hunting track which was Lionel's route a few days ago. It went cc. east for 10 minutes & perhaps 200 ft. altitude, then swung sharply to north along the crest of a main lateral ridge, rising several hundred feet hardly recognizable site of OLD GIMIGIMABATA village. Then about east again, more or less straight for RIU peak. Reached the end of Lionel's cut track at an estimated 2000 ft. but track for  $1\frac{1}{2}$  hours from there and appeared to be the lower sharp crest visible from near Trinomioia. Clouds then cleared temporarily to give me a glimpse of the true summit, about  $\frac{1}{2}$  mile to the south & 200-300 ft. higher than where I stood. Low scud covered my small crest. Caliphyllum, Melastomeceae, Myosi, broad-leaved Timorium. At Lionel's stopping place I collected a fine, fragrant Rhodendron growing as a slender shrubb in low scrubb edging a precipice. This altitude seemed to mark the limit of a big Dacoydium abundant for 300-400 ft. lower down. Gathered in all about 10 spp. of orchids in flower, including 6 Dendrobiums. One of the dendrobs is the big spotted white sp. of Misima. Mist, rain and track cutting hampered my collecting. Got back to camp, wet under my raincoat, at 3PM.

Fine, starry night. Only two boys out jacking.

Lionel, weather permitting, will finish cutting track to the top of RIU tomorrow. About 293 hours cutting from my highest point, I estimate.

Sunday Aug. 26: Overcast most of the day; no rain. Had to spend about two hours in morning waiting for brief spells of sunlight to photograph four of the plants collected yesterday. There is always the problem of cloud and wind in closeup color photography.

Spent the day in camp, making pictures, and preparing yesterday's gatherings (38 numbers). Included was a small yellow-stemmed, very slender Calamus, the first of the genus I have collected in the Louisiades, and apparently identical with a species of Normanby Island. Saw a much larger species on the mountain yesterday. No Calamus seen on Misima. The Louisiades are very poor in palms.

Nothing in traps last night, nothing shot. Rus jacked for  $1\frac{1}{2}$  hours tonight for no results.

Today Liopnel took four boys and finished cutting track to the tip of Riu. About  $1\frac{3}{4}$  hours cutting from my last point. Grade not too bad.

Since the day before we left Joe Landing, I have had trouble with my left shoulder. It might be rheumatism & coincidence with shoulder I dislocated on Mt. Daymanin 1953. It could be something else. I have not had rheumatism before.







Monday Aug 27 Some showers in morning and a slight one in at nightfall. Peak of Riu with a driving and mist all day.

A Riu (Rattlesnake). Left camp with my two boys at 7:20 & returned at 4:10 - nearly nine hours without food or water. A difficult mountain for its altitude. It is so steep to the south that climbing from there would be out of the question. A spur from the west offers what looks like a good approach from HINAI Bay. The ridge to the SSE (continuation of the backbone range) appears to be very narrow and up & down. I caught only partial glimpses of it. Had doubts about the weather when I left camp at 9 o'clock, when I was near the 2000 ft. level, rain began and for 30 minutes we sheltered under a packcloth carried for the purpose. Decided to turn back, and started to collect. At 10:10 the weather looked like taking up, so we resumed the ascent - it is too gradual most of the way to be called a climb. Reached Lionel's Lookout at 10:15 (no view at all from there on way but fine panorama of HANAI Bay (?) on way down in the afternoon. My far point of the 25th (about 2200 ft.) reached at 10:30. From here traveled slowly, searching the stunted forest for Nothofagus, which I could not find and reached the summit (2654 ft.?). Have m, map in camp) at 11:00 o'clock. Only a few really pinches. Taking ones time, the ascent could be made in about 1 hour and 30 or 40 minutes from camp, excluding stops,

On the way up Dacrydium first appeared at 8:30 (c, 1500 ft.) & reached Lionel's Lookout (c, 2000 ft.) Low, smooth -stemmed caps formed a small strip of ferns the narrow, very clayey spur crest at about 1600 ft. & were not seen elsewhere. A patch of giant Gleichenia fern in a small saddle under Lionel's Lookout perhaps indicates Eichhorn's camp site of 1915 or thereabouts. Between my lookout of the 25th & the summit the forest is low, more or less windclipped scrub 15 - 20 feet high, fairly heavily scarred. Two slender tree-ferns (Cyathea) collected there. A pale feather-leaved palm recalling those of the mountains of Normanby & Fergusson, is scattered through the scrub and conspicuous when one looks over the scrub, but was not in collectible condition. On the summit the scrub apparently was low enough to be called shrubbery, but it had been completely wrecked by Lionel and his boys yesterday. A circular fairly level bit of ground about 30 feet across on top. From the appearance of the wreckage the summit scrub was composed largely of a red-flowered Metrosideros & two Lauraceae (one with anise-scented bark). These spp are very plentiful down to my lookout (also a Coleophyllum, which was on top, too.) The white Rhododendron had been on top (collected some old capsules which I will examine for seeds when dry). A rich heavy on the trees. Next abundant bryophyte was a fuzzy green hepatic (#27391) on the tree trunks. Bases of the stunted trees tented with moss-covered roots. Not much moss on the ground. Mountain summit probably under cloud most of the year.

Nothing in traps. Two Pogonomys, gray rather than brown in color and with black tails instead of brown, cut upon a tree by the mammal boys.

Tuesday Aug. 28: Rain began about 12:30 last night and did not clear off until about Midday. Sunny afternoon.

Spent most of the day preparing yesterday's gathering of 39 numbers of plants.

Last night, when the lamp was being carried from my tent (where we have our rum and water) to the preparation fly, where we eat, a great atlas moth fluttered to it and was slapped to the ground & caught by Lionel. An almost perfect specimen with wings 11 in. in length. Photographed today.

Out jacking for about three hours last night. Lionel shot a Phalanger, a Petaurus and a yellow-caped Pteropus. Tinker got probably the same species of Pteropus, but its cape was much darker and there was irregular white-blotched coloration below the cape. Nothing in traps on the two bat nets rigged.

Since Sunday Lionel has had a cold or mild flu. Now Rus has it. Esulala has malaria, brought on by the rain, no doubt. Since a bad attack in the mountains of Fergusson two months ago, he is supposed to have been on a weekly preventive dosage of camograin.



London, Aug 25  
 Man with a driving and what else.  
 Some shows in morning and a night one in a night club. Read of

the ridge to the SNE. Our position of the ridge was very narrow and we went down. I caught only partial glimpses of it. Had doubts about the weather when I left camp at 9 o'clock, then I was sure the level, rain began and for 15 minutes we shuffled under a miserable, scattered fog. I decided to turn back, and returned to camp at 10:10. At 10:15, the weather looked like clearing up, so we retraced our steps. It is too gradual work of this kind to be called a climb. Reached Linnell's house at 10:15, no view at all from there on way but fine panorama of Linnell Bay (3000 ft) on way down to the beach. At 10:20 (about 2800 ft) reached the beach at 10:30. From here traveled along the beach to the abandoned Linnell's house. Found it old and in ruins. Only a few walls left. (2500 ft. level in camp) at 10:30. Only a few walls left. The ascent could be made in about 1 hour and 30 min. minutes from the one time. The ascent could be made in about 1 hour and 30 min. minutes from camp, including some.

[illegible]

It is a small, dark, and very hard wood, but it is very strong and is used for many purposes. It is a very common wood in the tropics and is found in many places. It is a very hard wood and is very strong and is used for many purposes. It is a very common wood in the tropics and is found in many places.

\_\_\_\_\_ This began about 1930 I say right and did not clear it until about 1935. I was at the time.

Spent most of the day repairing motorboat & cleaning up 13 numbers of houses.

...and was attached to the ground & caught by himself, an almost perfect specimen with wings all in, in Ischia. Photographed today.

One looking for about three hours last night. I called about a 12:15 a.m. and a yellow-topped piaggio moped got through the same stretch of barren and the cane was seen. Handstand there was a stranger with a black celebrity for the case. Nothing in terms of the two but not.

Three Sunday School children had a coin of mild steel. How was it? Sunday's day  
material, brought on by the train, no longer. Three a half entered in the community of  
origin. The morning and he is supposed to have been on a weekly preventive course.



N.Y. 9

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Wild pigs go high - to at least 2000 feet - in the mountains. Many rootings in some places. The stiff yellow clay would seem most unproductive of food. On all the slopes including the camp at about 1000 ft., there is only a very shallow cover of humus over the clay. The trees of the forest spread innumerable roots only partly covered by duff or humus. These roots make worn paths very uncomfortable to walk on with boots.

Wed Aug 29: Some heavy rain last night; creeks murky until at least midday. Storms at intervals through the day, some heavy.

lateral

Botanized down a spur which runs from camp down to the creek. Fair results. Two species of Cyathea (4th & 5th for Sudest) and a purple-stemmed orchid among the most interesting. The rain forests of the locality seem to have a fair variety of canopy and lesser trees, but are very poor in undergrowth, lianas and epiphytes. Even the banks of the big creek are poor. A good case of geographical alternation? or perhaps the yellow clay may be an important factor? The creek rocky and half-gorgy up to near where Lionel had his night camp. From there a sudden change to flat broad bottom & slaty (a schist) shingle.

Again nothing in traps or bat nets. The nets moved to the top of the ridge above camp. Jacking last night, Rus got two Pteropus hypomelanus, Lionel a Phalanger & a Petaurus.

Tonight Lionel and his boy Tibker have 10 snares set in the valley to the south of camp, where Lionel reports many small rootings in the forest. Rus did not bring any steel traps to this camp.

About 3:30 this afternoon the Joe Landing Councillor & two young men arrived with mail and packages which Father Twomey put ashore this morning. A letter from Twomey. Only 41 of 56 packages shipped to us from Samarai arrived at Nioa on the "Muniara". Twomey does not want to transport us to Rambusc in a week's time. Has to be in the Calvados Chain at that time. Lionel will go down to the coast on Friday & go on to Nioa to see what he can arrange.

Sandflies have been bad in camp the last two mornings before breakfast. Found several small brown leeches crawling on me in the forest this morning. The boys often pick them up on their bare legs after rain.

Thursday Aug 30: Bright sparkling day after a rainless night. Sandflies bad in camp

Botanized down the south-winding spur to the soil above camp. Most interesting plants a big Metrocideros? common in these rather characterless forests of the ridges, a big Gordonia & an tree-fern (Cyathea) which I think I have collected on the island before.

No mammals in traps, nothing in Lionel's snares (a total of 25 set tonight). Lionel jacked over two hours last night for nothing. A bat net, on a new set on the spur above camp, yielded 3 Macroglossus - new for this island.

For breakfast we had eels caught by Lionel's helpers last night after jacking was finished. Fried with their skin on the eels were rather disappointing. Even who gobbles up fresh meat of any kind, had only one piece. Last night in the same creek SE of camp Lionel caught for the collection two species of ray fish. One, large and brownish, looks like a species we took on Misima. The other, small, bluish with red behind the head above clings to the rocks in very fast water.

Friday Aug 31: Another fine day with no rain in the 24 hours. The mountain clear when I saw it from the spur above camp about 7:30. At 11 the summit was clouded over.







Collected in the valley of the stream to the SE of camp (this rises on Riu). Little of special interest. The flora is poor. However, I have on hand more material than I can dry.

Rus with his two boys left some time in the morning to spend the night on the mountain. Took Tubuga as a carrier, he returned about 1 o'clock. They are to camp in the saddle at Lionel's Lookout where I think Eichhorn was camped. Have traps, a bat net, & will jack. I expect them back tomorrow.

Lionel to Joe Landing. He will go on to Nimoa. Tomorrow walk on along the coast, then cross (by canoe) to arrange for our transportation to RAMBUSO (on Friday 7 Sept., if possible) on to Rossel (Friday, Sept. 28).

Sat. September 1: A heavy shower at 3:30 AM. Rain through much of the afternoon. Yesterday felt better than usual at 3 PM the thermometer stood at 81°F in the shade. The lowest temperature noted here is 71°F.

Collected down to Lionel's camp, then up the creek for perhaps  $\frac{1}{2}$  a mile. A fair day. My terminal point was at a waterfall about 30 ft. high, below which was a small basin more tropical in appearance than is general for the locality. An ample polewood layer gives most of the forest a foothills appearance. All hard timbers. I have not met with a second growth tree in the locality.

Rus returned from the mountain with nothing to show for the trip. Had out over 100 traps. Jacked for only 20 minutes, found west of the ridges too steep. Went to the top of the mountain before starting to rig camp, yesterday morning.

No mammals in traps, set by the cook, or in Lionel's snares, which now number 25.

Galume, who went to Joe Landing yesterday with Lionel, returned about noon. A letter from Lionel intimates a bad mess in the delivery of our "Muniara" cargo. Sixteen items are missing, including all kerosene (7 drums) and sugar (2 bags) ordered, 2 boxes of ammunition & some of my collecting supplies. All collecting supplies were consigned in cover to Misima, instead of Nimoa, and I thought that if they had been put off there they would turn up at Sudest within a week or two. Today's news is disturbing. There is no knowing where our missing cargo might be. Rus has ammunition and I have collecting supplies that will last perhaps another three weeks. We doubtfully have enough kerosene or sugar to last that long. Kerosene is essential for drying botanical specimens.

Sunday Sept 2: A sharp shower at 6 AM set the weather pattern for the day. Morning about half rainy; afternoon overcast, with a few sprinkles.

Ran a double shift with my one drying oven yesterday which kept me awake to near midnight. This AM I still had all of yesterday's gathering unprepared so stayed in camp. Sent the boys out for a while and they brought in some new things notably a fine climbing pink Medinilla (photographed), a Derris with leaves much eaten by insects (apparently when the leaves are very young & without chlorophyll), a Laricanthus with big white flowers & bright blue fruits, & a Begonia with white flowers. The flowers of the Begonia are small & the species looks like that of Misima.

Rus and Kim jacked last night for nothing. Nothing in the traps and 25 snares. One Macroglossus netted. Tugubo brought in three Pogonomys, cut from a tree.

We are on our last tin of tea. As I am the only tea drinker now in camp, I told the cook to make less tea than when Lionel is here. He reduced the amount of water in the pot & put in the same amount of tea, making a brew undrinkably strong. Most of our actions are just gestures to the natives. They see no reason or meaning in what we do.



Collected in the vicinity of the station to the SE of camp (about 1/2 mile N. of station). The station is about 1/2 mile N. of camp. I have on hand about 1/2 mile N. of camp.

The rain has been heavy since the morning. The rain has been heavy since the morning. The rain has been heavy since the morning. The rain has been heavy since the morning. The rain has been heavy since the morning.

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Monday Sept 3: Beautiful fine sparkling day with strong SE wind dying down late in afternoon. No rain in the 24 hours.

I had a disappointing morning down the creek which, with two main branches, drains the enclosed valley under Mt. Riu to the east of camp. Lionel reported a big stream "like the Lebadowa" on Normanby. I found a creek not half as big, dim, gorgy, with a ~~patterxxxx~~ bottom of slippery rock. Almost sterile for plants. However, on its banks a slender palm, common there, including a Calamus. This makes three ~~xxxxx~~ palm collected on the island. I have seen few moss ~~xxxx~~, all sterile: a big Orania, Linis-pallium (like undergrowth species, & two spp. of Calamus. Sent boys out in afternoon while I prepared plants on hand. They followed up Lionel's Camp well beyond the waterfall where I stopped a few days ago, and collected and collected several things new, including a big-leaved Marantaceae (?) I had not seen before.

Nothing in traps or snared last night, A Petaurus and a Pteropus jacked by Rus; one Miniopterus netted.

Saw my first snake for this densely forested area, a slender black which Tubuga later collected. This morning he brought in a very large brown iridescent skink, the biggest seen on the trip. Two species of snakes collected here.

Tuesday Sept 4: Clear dawn followed by a day of high overcast driving from the SE. A sprinkle of rain in mid-afternoon, another about 7:30 PM.

My last collecting day in the camp. Climbed the leading spur towards Riu to nearly as far as old TIMITIMABETA village site. Only 9 numbers collected, the most important probably being a small simple Sebizaea (?) (second species for the locality). Also collected a common Abyvie (?) - a canopy liana with warty dark stem. Am running a night shift with the plant dryer to catch up with a big lot of material on hand.

No mammals got by traps, snared, bat nets (2), or Rus jacking last night. This morning Rus is unwell and only Lik-lik is jacking.

Kim the cook, about the worst hunter in the world has done little else for two or three days but hunt pigeons (big blues). Got one bird yesterday and one the day before. None today and we ate bully beef stew for dinner, plus some sort of tree leaf that Kim gathered in the forest.

Wed. Sept 5: A very strong wind sprang up in the early hours of the morning. Another day of high overcast & no sun. Light rain 3 PM. - 4, heavier after that.

Finishing up a plant drying (there will be material still only partly dried to carry to the coast). & packing gear and collections. I have for the camp 203 numbers including 27 & hepatics, & 47 sets of herbarium specimens. Not a bad gathering considering the poor flora of these unbroken rain forests. A mixture of second growth would have meant many more plant species.

The camp has been poor indeed for mammals. About 150 traps out have yielded not a single specimen. I have never before seen trapping quite that bad. Results from jacking have been indifferent. Only 31 specimens of the following mammals have been taken at the camp: Petaurus, Pteropus hypomelanus, Phalanger orientalis, Macroglossus, Dobsonia.

The slack time in mammals more attention being paid to herps. (?) Total 192 frogs, 5 snakes, 6 lizards (skink). The deep forest environment is not favorable for reptiles.

Insects, only a few specimens of butterflies and a few spp. of Odonata were taken. Light trap material fairly rich in beetles, only a few moths. Best insect a fine Atlas moth smacked to the ground at night by Lionel,



[illegible][illegible]

Two of these were collected from the same place as the first two, but they were not collected from the same place as the first two. They were collected from the same place as the first two.

1. The first of these is the fact that the majority of the population of the United States is now living in urban areas. This is a result of the process of urbanization, which has been going on since the beginning of the 20th century. The population of the United States has increased from about 75 million in 1900 to over 200 million in 1950. At the same time, the population of rural areas has decreased from about 25 million in 1900 to about 10 million in 1950. This has led to a concentration of the population in urban areas, which has had a profound effect on the economy and society.

W. Last collection was in the area. When the evening train towards Rio de Janeiro was for an old TIMBETUVA village area. Only a small collection. The most important, probably being a small single collection. (Several specimens in the locality). Also collected a common fly -- a common fly with white legs. In morning a night shift with the light blue to white and with a dark red on the head.

Two letters are got to them, another, but they (2) or the other way right.

With this book, about the worst matter in the world has come little else for two or three years but more pleasant and more agreeable than this. But one bird variety and one bird better. None today and no more good ones for a long time. The book runs of

Page 10

趙子龍

During the past few years, I have been very busy with my work and have not had time to write to you. I have been very busy with my work and have not had time to write to you. I have been very busy with my work and have not had time to write to you.

[illegible]

to report. It does not seem to be a very common occurrence in the United States, but it is not infrequently reported in the literature. The case is usually one of acute inflammation of the lungs, and is often associated with a high fever and a rapid pulse. The patient usually complains of a sharp pain in the chest, and there is often a cough with a purulent sputum. The physical examination usually reveals a localized area of consolidation, and the x-ray examination shows a wedge-shaped opacity in the lung field. The treatment is usually supportive, and the patient usually recovers within a few days.

[illegible]



We have, apparently, a great surplus of carriers for this morning. Some are here in camp, others in a shelter down on the creek. Reported to be here are 10 from MADAWA & 21 from PAMELA on the south coast, and 17 from Joe Landing. It is 5:30 as I write and there is no word from Lionel. When we were visited on August 24 by three men of HULA village, south coast, Lionel said something to them about getting south coast men for our return carry to Joe Landing. There could have been no definite arrangement because no man of authority was here from Hula & on August 29, when the Joe Land ng councillor came to camp with mails, Lionel spoke to him about carriers for tomorrow. A nice mess; 47 men when we need 30 at most. It is still raining steadily and the people will be hard put to find shelter under our two flys, the cook house, and the small leaf shelter down on the creek. Joe Landing people say that Lionel has not returned from Nimea.

Thursday Sept 6: Transport for today looked like a doubtful proposition when heavy rain began at 12:30 last night and continued to 4:30. There were showers after that in the mountains, but not heavy enough for me to use the raincoat I carried all the way to Joe Landing in my hand.

Resolved the surplus difficulty in carriers by presenting all spares (27) with a stick of tobacco. Left camp at 7:45 with 26½ loads, arrived at Joe's Landing at 11:35. I did a little collecting and made some photos on the way. An easy walk. I am on my feet as long every morning.

Found at Joe Landing that Lionel has arranged for Bill Callanan of Modewa Bay to take us to Rambuso tomorrow; price 20 pounds, which is reasonable. Lionel is at Nimea and will return with Callanan. All stores seemed in order in care of VG Bom in the resthouse. Pinned specimens that Rus left were quite dry and could be packed this afternoon. Plants I left in drying papers were also good and dry.

Feel glad that the Sudest mountain work is over. Mt. Rattlesnake (Riu) always looked so remote from New York.



1. The first group of people who were arrested were the members of the "Black Panther Party" who were active in the civil rights movement. They were arrested in 1968 and 1969.

I carried the way to the house in the morning and the way to the house in the morning.



Friday Sept Fine day after a little early drizzle.

Callanan's "Polyanna", in charge of Lionel, anchored at Loe Landing, about three o'clock in the afternoon. When gear and stores were loaded it was too late to proceed to Rambuso. Callanan is sick at Madaua Bay, apparently gall stone trouble. Said to be a man of 56; ex-miner of Misiam(?) and North Queensland. Seems to have done well post-war at trading; owns two fair-sized boats; has recently (this year) bought all the Catholic Mission small plantations for 4000 pounds. Is just becoming established at Madaua Bay. The Polyanna is a trip 45-foot cabin cruiser, with greatly flared bows; was built in Cairns and used there as a fishing boat (line fishing).

As we were talking after dinner a local native rushed up to the resthouse with the information that a big crocodile was swimming in the nearby creek. Said beast, 7 ft. 4 in. long, was shot by Lionel with BB. Rus will get the skin (valued at about 6 pounds) to make shoes and a bag for his wife.

Saturday Sept. 8: Left Joe Landing at 6:45 am and reached Rambuso at 8:30. Smooth trip. Ran down the Gold Rush Channel inside the offshore barrier reef to where it ends at the site of old Bowla village, then into the open sea to an opening in the reef opposite the mouth of Rambuso or Proclamation Creek. A snug little harbor here. Anchored off a narrow gray gravel beach in about four fathoms (mud bottom), tied the stern to a stump ashore, and could almost step onto the land. Good solidly built resthouse and barracks right on the edge of the sea. Resthouse roof looks as if it might leak, however. The thin leaf bases of the sago palm used here, and throughout the Louisiades, for wall material. Weather proof and durable.

Seen from the sea, the Rambuso locality looks very promising. All rain forested hills except for a few native garden clearings, obvious second growth, and one or two small grass patches. Almost continuous belt of mangroves along the shore. Tall mangrove forest of Bruguiera, Excoecaria, Carapa, etc. immediately behind the resthouse. A rickety, rotten catwalk several hundred yards in length leads from the resthouse along the shore directly to the head of the bay, where there is a small village on a steep small hill. Excellent running water in Rambuso Creek, in the mangroves about 100-150 yards from the resthouse.

Were visited in early evening by the Fijian teacher in charge of the local Methodist Mission and all its stations on the island. He had just returned from a visit to Piron Island in a small dinghy. Pleasant, big young fellow. Has been here three years and has two years to go. Not sure that he will return after going back to his home. Married and his wife lives here. Lionel tells me that these native teachers give at least five years of their life to the mission without pay. The Fijian has not yet learned the Sudest language. Uses Misima language and the local pidgin English in his work. Has about 40 children in school at Rambuso.

Sunday Sept 9: Overcast day with some very light rain; sultry; only about an hour of SE wind in the morning; still after that. Thunder to the north, over the sea, in afternoon. Big bank of dark cloud conceals Rossel Island. It looks wet over there.

Started field work with a circuit to the head of the bay, through the village there (where the missionary lives, and has a small wharf), into the gardens behind the village where we got onto small tracks that led nowhere; back to the village, then west through the forest to the coast at the church. No decent track for any distance. Had directions from the Fijian teacher. Natives too busy sitting down, in observance of the Sabbath, to offer to help as guides, as natives almost invariably do when a stranger comes along. A semi-swampy coastal plain between the hills and the mangroves about the mouth of the creek. Tall forest there in which Pterocarpus



Yehuda, Gershon, and Yehoshua

the grove about the mouth of the creek. Tall forest was in view beyond the grove and a small swampy coastal plain between the hills and in appearance of the forest, to offer no reliable guide. As natives had no directional knowledge, natives too busy sitting down and west toward the forest to the east of the canyon, a direct track toward the village where we got into small tracks that had however been used to the village (where the missionary lived) and a small world into the canyon behind started ahead with a slight to the head of the bay, through the village.



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indicus is abundant, its yellow flowers scenting the air and strewn the ground in the damp shade. A tall marantaceous herb the principal undergrowth.

11.  
Monday Sept. 9: Heavy, driving rain from a thunderstorm during last night. Wind NE today; fitful ~~today~~ this morning; we feel the heat here when the wind drops.

Went west along the coast to Callanan's small (70 acres) coconut plantation, better than a mile from camp. Very poor botanizing. Barringtonia quadrangularis the most striking feature of the littoral vegetation. Forms great, heavy branched trees spreading low over the water and bearing an abundance of Dischidia, Asplenium nidus, Cyclophorus as epiphytes. Three or four hamlets along the coast. Foreshore rocky; dead coral shelf; bits of sandy beaches at the villages. One big built-up canoe seen, two smaller ones. They use mat sails here.

Got a guide at one of the hamlets, and he put me on a faint track which took me into primary forest on the ridges. Very poor forest of small trees. Saw nothing to collect, but did not go far into it.

Late in the afternoon I walked to the last hamlet west, where the VC of the village group, Labadi, was holding a death feast for his father (dead at least some months). In the morning I was shown into a small house in which quantities of donations of food were being "scaled"; much cooking activity; in a special covered shed a covered oven was being loaded with root foods amongst banana leaves. The afternoon a small affair with perhaps 50 people present. Food had been eaten by the time I arrived (4:15). A start was being made to produce New Guinea money in the form of big stone axes (some or most of them of the striped Woodlark ~~stone~~ Id. stone) and small orange neck ornaments, each of the latter in a braided holder. Big, crescent-shaped limesticks, some of them of tortoise shell and all inlaid with bagi (shell money), were another form of money. The policeman, who is head man of the community, had an assistant receiving most of the money. The two sat at the opposite ends of a mat. The first axes were received by the policeman, each being touched against the one of his upper arms by the donor. He removed the orange ornaments from their bag and laid them on the blade of an axe, the ornaments on top of a bag. The helper arrived supported by several women. He wore a ludicrously colored green and purple basketlike object as a hat. When he sat down, women tucked green skirts around his waist. One by one, as they were handed to women sitting by, or to the policeman himself, crescent limesticks were stuck into his armbands, stone axes were leaved (sic) against him, orange ornaments (in their bags) tucked under his upper arms. There must have been at least 20 stone axes. Made color flashgun photos without disturbing the proceedings (children and some of the men rushed the spent blue bulbs).

Five Rattus ruber in traps last night; a flying-fox and a silasila shot by Rus. A ruber brought in by a local native; 2 Pogonomys by one of our boys.

Tuesday Sept. 11: Wind back in the SE; blowing all day but sea unusually calm on the reef out of Bambuso; showers in the hills but none on the coast.

Went inland about 2 miles along a track which starts at the mission village (Veleva) and is said to cross the island to Rewa Bay (6 hours). Reached an elevation of perhaps 500-600 feet. First mile or better was through mangroves on on the catwalk, through the village on its hill, then up through garden lands fallow and cultivated. Cool through the forest but when I came back across the gardens just before noon the sun was very hot there. The hard yellowish ~~soil~~ clayey soil of the cultivated sloped would seem to need to produce good crops. Noticed only one thriving bit of garden, and it was shaded in part by bananas and young coconuts. Sweet potatoes the principal crop, with taro a close second. Quite a lot of sugarcane grown.



[illegible]



Fair amount of mandioca, few bananas and papaws. We have bought from the natives here pumpkins, sweet potatoes and sweet potatoe tops.

The forest, very poor at first, improves in composition, height and timber volume with the altitude and distance from the coast. A Casuarina perhaps the most interesting tree collected; common and reaching a large size on the ridge crest I followed.

Four R. ruber in traps last night; one Petaurus shot by Lionel, a Pteropus at dusk by Rus.

There arrived here yesterday the "Murus", a trochus-shelling sloop with two dinghies and a complement of at least 16. At least a third of these people are hangers-on. A usual pattern when the running of a vessel is in the hands of a native. Yesterday's take was 146 shells. The shells are boiled when fresh in a 50 gallon drum with a side cut out of it to make a trough. Water brought to a boiling surge three times; longer cooking spoils the shell. The dead animal said to shake out easily; it is eaten at times by the crews; said to be tough.

We have hired a small outrigger canoe for use in the harbor, Lionel has tried line fishing, without success. Great schools of sardines enter the harbor and cruise near the shores. Bought a meal of them a day or two ago; very good, and not difficult eating.

Wed. Sept 12: Fine clear morning; a succession of showers, some heavy, in afternoon. Wind SE.

Botanized up Bambuso Creek about 3/4 mile or so to where it comes out of the hills in an attractive little valley of alluvial soil partly under gardens now and all formerly cultivated. Needed only a few plants to use up all my driers. Gusty wind, swirling air currents in all directions in our preparation fly, have greatly lowered the efficiency of my drying equipment. Today I had four walls of plaited sago leaf put around the drier ~~xxxx~~ units.

Several Pteropus and Petaurus shot last night by Lionel, Rus and Tinker; 5 Rattus ruber in traps.

Learned that there is suspicion amongst the natives that we are collecting the flesh of mammals to go into tins of meat. They don't mind our putting cuscus and flying foxes in, but they object to rats. All are invited to see just what we do.

This evening about dusk a councillor and nine men arrived from Rewa Bay, on the south side of the island, wanting to carry for us. Gave them a stick of tobacco each and rice for two meals. Our carrying for Suvest is over.

Thursday Sept. 13: Some showers on the hills, none on the coast. Rather strong SE wind in the morning, little wind in afternoon.

Went up Rambuso Creek perhaps 1 1/2 miles, to where it forks. Followed the right hand or main branch a little way through primary forest, when it became gorgy and I sent the boys on. Few results worth while. A striking feature was one cleared slope crowded with fine large tree ferns. Have seen nothing like it on the expedition. Very tall with clean gray stems.

Again two R. ruber in traps. Several silasilas and flying foxes jacked by Rus and Lionel. Lionel stayed out until 11:30 and also got a cuscus. We have very few cuscus for this island. There are reports that native cats (Satanellus) take village fowls; several sets of steel traps have been out several nights now. We have not taken a Satanellus on the expedition. Since leaving Misima we have been told (by Callanan) that they were common marauders of the chicken yard at Ewaiboga (?) Plantation on the east end of the island.



fair amount of success. The number of birds seen was about 100. The birds were seen in the morning, and the weather was very good.

The forest was very good at first, but it was in a very poor condition. The forest was very good at first, but it was in a very poor condition. The forest was very good at first, but it was in a very poor condition.

Four or five miles in from the first light, the forest was in a very poor condition. The forest was very good at first, but it was in a very poor condition.

There were many birds seen in the forest. The forest was very good at first, but it was in a very poor condition. The forest was very good at first, but it was in a very poor condition.

We have seen a small number of birds in the forest. The forest was very good at first, but it was in a very poor condition. The forest was very good at first, but it was in a very poor condition.

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Friday Sept. 14: More or less showery after heavy rain between 9 and 10 am. SE wind.

Crossed the bay by canoe to Varivarai village, 15 good houses, one of them with whaleback roof), thence along a neglected government road leading approximately east inland a bit from the coast. Ridges with small sago swamps and sluggish small streams in hollows. The rain spoiled my morning, but among the few plants collected was a fine Gardenia? with delicately fragrant flowers 7 cm. long. Good primary rain forest at my terminal point, which was perhaps only 100 feet above sea level. Many gum tree fine (Vatica) in the forest. Worth a proper examination.

Lionel jacking until nearly midnight, etc. and Rus a couple of specimens. Following a report of very numerous rats on the small island of Boboa, east a couple of miles close to the coast, Liklik and a native are there this evening with traps.

Another councillor and three men from Rewa Bay. The mystery of the people offering in such numbers to carry for us is resolved. Father Tomay of the Catholic Mission has been taking a hand, telling the people that we need carriers, and to offer for the work. Perhaps the government would not be pleased, if the news got to Misima. McLeod would probably object to any exercise of authority by the church.

Three weeks in this locality, as planned, would be too much for profitable operation. In the morning, therefore, a runner will leave for Callanan's place on Madaua Bay with a letter asking him to transport us to Kisima any day between Friday Sept. 21 and the following Monday.

Lionel this afternoon put on a radio show for the local populace. The native language program from Port Moresby, which he tuned in on at 4:30 and which went to about 5:45. Police Motu was the language most understood of several on the show, including Rabaul pidgin English. No word of thanks from anyone of the audience of about 50 men, women and youth.

Saturday Sept. 15: Showers in the morning interfered with my field work in the nearer hills, but no rain fell on the beach. Showers both places in afternoon.

Went to the mission village thence around the head of the bay through tall mangrove (Bruguiera) forest, garden lands on the hills now being planted to yams, sweet potatoes and casava (some yams already have shoots a foot long), then primary forest to near Varivarai village. Very little of interest. MacGregor frequently commented in his reports on the poorness of the Sudest gardens. Probably he did not take into account the poor clayey soil.

Rus shot last night a cuscus and two Nyctimene, Lionel had his later jacking spoiled by rain and got only a Petaurus. Nothing from traps on Boboa Island. The boys were instructed to examine traps often, and pick them up and leave for 11 p.m. Instead they returned soon after dark, leaving the traps on this island. Reports of all traps sprung, hair in some, the cords of some bitten through. Crabs or rats? The natives bring in occasional mammals. Today a flying-fox. The flying-foxes are now in a breeding season and carrying young of various ages. Boys examining coconut palms for small bats.

Sunday September 16: Fine though partly cloudy morning. Light rain through afternoon and into night. SE wind. We seem to be in a major weather disturbance,

Crossed by canoe to a landing between Varivarai village and the head of the bay and collected mostly in primary rain forest of fair quality. Also worked along the edges of two garden clearings, usually productive places for plants, for, from the clearings one can see the forest better than any other way. Interesting species include a little reddish ground orchid, the first Caroimia I have collected in the Louisiades; although I have seen this or others before, and the second Pandanus for this island.



November

[illegible]

А. С. СЕДУХИНА



At least three other spp. of pandan are present on this locality, but sterile

Crossed by canoe to a landing between Varivari village and the head of the bay and collected mostly in primary rain forest of fair quality. Also worked along the edges of two garden clearings, usually productive places for plants, for, from the clearings one can see the forest better than any other way. Interesting species include a little reddish ground orchid, the first Garcinia I have collected in the Louisiades, although I have seen this or others before, and the second Pandanus for this island. At least three other spp. of pandan are present in this locality, but sterile.

Lionel and Tinker, jacking last night, produced two blackish cuscus, a Dobsonia and a Pteropus. Traps on Boboa Island yielded 15 brown Rattus which Rus thinks is the large bristly rat of Sudest, of which we have only one other specimen.

Shot by accident last night was a fair-sized, rather dark frogmouth Podargus which Rus has pickled. The call of the frogmouth here differs from that of any other I have heard. It begins with a succession of bubbly sounds and ends with two or three clashes of the bill.

Our messenger sent to Madaua returned this evening with a letter from Bill Callenan. He cannot take us to Rossel before Monday 24th. Expects to be here at 3 to 4 in the afternoon of that day. During the afternoon a councillor of Joe Landing arrived with mails- 17 letters from me and a lot for Rus. This had been dropped at Joe Landing by Timperley (District Commissioner), who sent a note saying that our cargo on Betty Ann, landed at Nimoa, had been sent across to Griffin Point. Will arrange for Callenan to pick it up on the 24th. Timperley is investigating a report of Teague having seduced a native girl at Joe Landing. The lass went to the mission at Nimoa and reported the matter to the sisters.

My mail contains a letter from Van urging that our original plan be adhered to and Woodlark be visited, and in addition, the Trobriands. A letter from John K. Howard, Marine Laboratory, University of Miami, requests information on the occurrence of marlin, sailfish and spearfish in this part of the Pacific.

Monday Sept. 17: A wet day and very little field work done. A break in the rain between about 9:30 and one o'clock. Rain mostly not very heavy.

Sent the boys out for a while in the morning while I worked on plants and insects on hand. They found several plants new to the collection including what I take to be Carellia of the Rhizophoraceae -- a dry land tree of the mangrove family. This tree rather common in the primary rain forest of the ridges, but not seen in flower before.

Tinker, out jacking last night between showers, shot a cuscus, the only mammal on the table today.

Tuesday Sept. 18: The disturbed weather continues, with strong gust of SE wind day and night, but only a few small showers today.

Botanized east past Varivarai village to a creek, rather bigger than the Bambuso, which, where I struck it, was big enough to carry a new canoe which had been cut out of a tree. Recollected the Vatica (gum tree) of the island, my previous material being rather scanty. Nothing else of much interest.

Nothing in traps. Rus shot a Pteropus conspicillatus and two Nyctimene. Lionel, out for 2½ hours last night, got nothing, which is unusual for him.



1. The first part of the document is a letter from the President of the United States to the Congress, dated January 1, 1861. It is a very important document, as it is the first official communication from the President to the Congress since the inauguration of Abraham Lincoln. The letter discusses the state of the Union and the challenges facing the country at the time.



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Wed. Sept. 19: Still showery at times day and night, from SE. High cloud drift is from the NE. Seem to detect an increased warmth in the air when the wind dies down. We are approaching the change in the season, from SE trades to a spell of variable and fitful winds before the NW monsoon sets in.

Made a trip along the coast to Caimanan's coconut plantation, on to Ladjimari hamlet and another beyond it, until stopped by a sago swamp I could not cross. This was near the beach, there lined with scattered Calophyllum and associated trees; what is a barrier reef at Rambuso becomes a shore reef here. White terns and cormorants busy on a school of sardines which for some days have been working most in the shallows. The two hamlets, across a small creek just beyond the plantation are unswept and weedy. The most neglected and unattractive I have seen on Sudest.

Clearcopy Onion Skin

MADE IN U.S.A.



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The plantation is in process of being cleaned by the local people on contract. Probably about 50 men at work this morning, cutting brush four women cutting grass around the smokehouse and boyhouse. The price for cleaning the 60-7- acres is to be 10-pounds in cash, plus a bag of rice and a case of meat for a feast - if the job is done well and with despatch. The people have just learned that Callanan is due on Monday and they are making a great effort to complete the work in a week.

Collected over 20 numbers of plants, mostly littoral species and weeds native and introduced. The littoral trees were Hernandia and Scaevola; Tournefortia is here but sterile. A common regrowth fig added another to the rather numerous spp. collected on the island.

A spiny Rattus in traps shows that that the species taken a few nights ago on Boboa Island is a different species.

Thursday Sept. 20: Weather as yesterday (at least in the hills) with continued high drift of cumulus clouds from the NW, No rain at camp; I had showers at about 1000 in the mountains.

A long morning in the field, from 7:15 to 1:35, took me about three miles inland and one mile from Mt. Imau. The altitude I'd say was about 1000 feet. The forest improved as I made the long, slow ascent, hunting for trees to collect. It became wetter, and somewhat mossy and cooler. Finally, the little used track I followed broke out on to grassland. Not the coarse grass one would expect to find at this altitude, but a fine cover only about ankle high as a rule. It was like coming onto alpine grassland from the subalpine forest of New Guinea, at about ten thousand feet. A subalpine appearance was given by the forest surrounding the grassland, a low stand of Dacrydium and Casuarina that looked coniferous. The grassland, undoubtedly the site of a settlement long since abandoned, was open and in places rolling, and perhaps 50 to 100 acres in area. An outcropping brown slaty rock was so soft that I could kick it to pieces. Some interesting small herbs on the grassland: Eriocaulon, dwarf Mitrassone, a yellowish Stricularia, Stackhouseia, and what I take to be a Leschenaultia and Lycopodium carolinianum. The last two could be at alpine levels. I don't think I have collected Leschenaultia in New Guinea before. A brown-foliaged low tree Rhodamnia formed a border community. Numerous pig rootings about the forest borders, often containing water.

One of my objectives today was the collecting of an oak which I expected to find on the slopes. Found only one tree, at about 500 feet, with leaves badly eaten by insects, but with young acorns.

Lionel and Liklik, jacking last night, both got two Pteropus. One rat in traps. One of the bats was conspicillatus, only occasionally collected on the island.

Friday Sept. 21: A beautiful early morning followed by a generally overcast and in part showery day

Having a morning's work on hand, I sent the boys into the field and, between showers, they collected six numbers new to the collection. Made color pictures, I hope, of a beautiful cream and orange Dendrobium of highland type collected in the mountains yesterday. Using directions recently received from the National Geographic re focusing the close-up equipment.

Nothing in traps. Two cuscus, two Pteropus hypomelanus, a Dobsonia and a Nyctimene jacked by Lionel, Rus and Liklik. The locality appears to be exhausted for variety of mammals, at least on present methods. There should be more small bats here, and there are reports indicating the presence of Satanellus. A Melomys is known from Rossel, and might be here, too, but only this evening have traps been set in the primary forest of the slopes, about 20 minutes walk for a boy from camp. The caution necessary for a booted person on several hundred yards of "bridge" through the mangrove fringe adds short five minutes to the walk for a white man.







Saturday Sept. 22: Glorious fine day with just enough cloud to make it a photographer's day. A strong squall at 5 am. Wind, what there is of it, now from the NE.

Botanized some distance past Varivaria for not much profit in worthwhile plants. Twelve numbers brought the total for Sudest to over 500 to date. Ridges covered with primary rain forest go right to the mangrove there. A very good garden, one of the few seen on Sudest, photographed (bananas, manioc, sugarcane). This garden, like most in the area, unfenced. Pigs in this ridgy country do not wander far from the village of their owner.

The cuscus and a Pteropus hypomelanus shot by Kim last night; a Pteropus conspicillatus by Liklik; a Nyctimene by Rus. A net, set for the first time at this camp, yielded a MacroGLOSSUS.

Lionel went out to the reef in the canoe last night, and in the bright moonlight (a day or two past full), made a fine catch of 16 fish. Included were a tuna some 15 inches long, a red sea bass, a whaler shark about 2½ ft. long, sweetlips, 4 pike, rock cod, a small coral trout and a tiger bream. Fish for all to eat, plus, this evening, a young green turtle, about two feet long, bought for three sticks of tobacco from a native who had speared it. The price asked for the turtle was low; Four sticks were actually paid. Good white meat.

Stocktaking of foodstuffs, by Lionel, shows that we have enough of most items on hand to last two months.

Sunday Sept. 23: Strong southeaster blowing; few scuds of rain; high cloud drift still from NW. This high altitude NW wind started on Thursday.

My last day in the field for this locality, and Sudest, yielded enough plants to bring the total of numbers collected at Bambuso to 202. (1254 herbarium sheets.) In number of herbarium sheets this is the best camp since Maikaiuna. Total plant numbers for Sudest is 515, which is satisfactory enough. We have been on this island five weeks and two days. At Joe Landing there was a flowering season. Not so here or at Mt. Riu Camp. Only a sprinkling in flower at these two camps. Here we have had a lot of annoying showers, especially in the morning, when I do my field work, but there has been no great amount of rain. About enough to keep the native crops flourishing -- as much as they do on this clayey soil.

Liklik's traps, set in the primary forest a couple of nights ago, yielded this morning a beautiful rat, light russet brown in color and white (to the skin) underneath, which looks like a Melomys. Very different from the Melomys caught on Normanby, the only other Melomys we have. Tubuga's traps gave another spiny big Rattus. Rus lifted his traps this morning. A cuscus and a Pogonomys shot by Kim last night, just behind the beach. Rus got a flying-fox.

Had from the Fijian teacher's wife a very nicely baked chicken for our Sunday dinner. I was in the field when she called with it. Speaking no English, she had a quaint letter from her husband, which was souvenired and has not been seen by me. I understand it was addressed to "Dear Christian Brothers at the Bambuso resthouse." Three white men in his area, working on Sundays, must be a bit discomforting to the missionary.

Monday Sept. 24: Weather as yesterday - in daylight hours. Some very heavy rain sometime during the night.

The day spent in packing and writing letters. I lost several hours through an attack of some queer illness which seized me after lunch. Suspect a form of indigestion brought on by eating two not quite ripe bananas. My second illness on the trip.







Bill Callanan arrived in his "Polyanna" about 11 in the morning. The cargo is all loaded this evening, ready for an early start in the morning. Bill brought the cargo (16 pieces) which was missing from the consignment ex "Muniara" to Nimoa about a month ago. The mission had sent it across to Griffin Point by the District Commissioner (Timperly) about two weeks back.

One rat in traps last night. Rus inspected the site where the Melomys was caught the night before last.

Bought from the local chief, an old man, two very nice plain old wooden food bowls for the ~~mission~~ Museum. The first anthropological objects I have gathered. I did not plan to do much in this line until we reach Rossel.

Tuesday Sept. 25: Left Rambuso on the "Polyanna" at 6:20 am. Rather strong southeaster sprang up and after taking something of a beating with heavy seas we put in at Hamba, on the SW part of Rossel. Passed through Gwe Passage in the Barrier Reef to get to Bamba. Stayed there the night, sleeping ashore in a govt. resthouse. House roof faulty, but no rain fell. Few sandflies. At a hamlet east a bit from the anchorage, there is a platform of flat stones and giant clamshells, from which rise two sloping stone monoliths like those of Goodenough Island. This structure ~~asserting its native~~ right on the edge of the sea under big old Calophyllum trees. Called Chebaga, according to a local native (Songi) on the crew of the Polyanna; a talking place he said.

The Osborne Brothers have a small plantation at Bamba, employing eight Gosiago boys. Fine big smokehouse of sago thatch.

In conversation with Callanan, learn that he is a miner taken to trading and the sea. He is afraid of the sea, Could have run on to Abuleti in the conditions we had. A heavy-set red-faced short man of rough appearance and manner. Worked at Candlish's Dry Hash mine in the Etheridge in the midthirties. Came to Misima with the Guthbert concern before the war; was one of the two men sent back to reopen the mine after the war.

Total of mammals collected on Sudest was 225, belonging to 14 species. There were 159 skins and skulls. Frogs for island amounted to 296, snakes 12, lizards 15, freshwater fishes 49. Specimens of two species of freshwater crayfish were collected on the Mt. Riu slopes. Light trap results for Rambuso were the poorest yet; butterflies and Odonata fairly good. One or two new butterflies most days.

Wed. Sept. 26: Raised anchor at Bamba at 6:55 am. Kept close outside the barrier reef in moderate seas (long ocean swell with not much break). Re-entered the ~~reef~~ barrier through Gware Passage and anchored off Abaleti at 9:20. Anchorage is off a sand bar at the entrance to Abaleti Creek. The Osbornes (Hugh, Ron, and Uncle Eric) came off to meet us and take our cargo ashore in a launch. About half a mile up the creek, on the western bank they have a slipway and workshop where they have almost completed building a very fine 60-foot motor vessel called "Yelan Gili II." The first Yelan Gili was appropriated during the war and not returned. The second is to be taken out over the bar Monday afternoon, if conditions are favorable. Tides cannot be predicted with any accuracy. There is unlikely to be quite enough water on the bar to float the vessel. It is proposed to set one of the two 40 hp Lister diesels quarter astern, the other three-quarters ahead, and thus scour a passage in the soft sand for the ship. Hugh, the elder Osborne, is perhaps not yet 30 years of age. He is a shipwright by trade (learned of the Wright of Brisbane). Ron, a year or two younger, is a qualified Diesel engineer. They have been six years building their ship. All woodwork but the doors and cabin windows, is local pit-sawn timber, beautifully handled. Main timbers are Kiwini (Intaia), planking rui (a dipterocarp), decking white beech (Gmelina). Metal fittings are largely from wrecks on the Rossel barrier reef, a graveyard for ships. For instance, a fine brass ladder and copper tubing came off an American submarine which went up during the war. Other items are from a Japanese ship.



Will Graham arrived in the morning, and in the afternoon he left for the night. He was very tired and had a headache. He was very tired and had a headache. He was very tired and had a headache.

One day in the morning, the first day of the trip, the weather was very good. The sun was shining and the wind was light. The weather was very good. The sun was shining and the wind was light.

On the first day of the trip, the weather was very good. The sun was shining and the wind was light. The weather was very good. The sun was shining and the wind was light.

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In conversation with Graham, it was found that he is a very good person. He is very kind and helpful. He is very kind and helpful. He is very kind and helpful.

Total of mammals collected on Graham's trip was 100. The mammals were very good. The mammals were very good. The mammals were very good.

Will Graham collected 100 mammals on his trip. The mammals were very good. The mammals were very good. The mammals were very good. The mammals were very good. The mammals were very good.



The original Osborne Brothers, Harry and Eric, came to Rossel fifty years ago (Eric in 1906). A sign on the boatshed reads, "Established February 10, 1905." Harry, father of the two boys, died some years ago (since the boat was started). Eric seems to have got rid of his interests in the property and to have spent his time since the middle thirties at Bulolo in New Guinea and in the big timber area of SW West Australia. He served as a tugboat engineer with American small ships during the war (Hollandia, Philippines, Okinawa, and later Korea). Now about 70 years of age. Mrs. Harry Osborne survives and lives at Abeleti. Also here are Hugh's wife and two small children. Eric came to help finish the boat, 15 months ago.

The Osbornes have on Rossel several small coconut plantations besides Abeleti and Bamba, also trade stores, a 50-foot launch and a smaller one for inside the reef/work on visits to their plantations and stores.

My impression from the old reports was that Rossel was entirely forested, but today several grass patches were seen along the coast between Bamba and Abeleti. The island is mountainous, but apparently there are several fairly extensive valleys at low elevations on creeks along the south coast. We heard that the coconut parrot was not found on Rossel, but they are at both Bamba and Abeleti. Another report was that there was no betel-nut on the island. Eric Osborne tells me that one species (minor) grew here and was chewed, originally, and that the big betel-nut is now grown in quantity.

No rainfall records have been kept at Abeleti, which is a pity; rainfall is very heavy, as the result of SE clouds being bottled up in the valley. At the Catholic Mission at Jingu, on the NE coast, and the mission has periodical shortages of water.

Upon arrival at Abeleti we had the choice of two government resthouses, equally small, one on the beach, with muddy tall mangrove swamp behind it, the other on a slope at about 150 feet. Chose the latter, with as yet no boy's barracks, which is close to a medical aid post in charge of a native orderly. A fine view of the reef and passage, mountains rising rapidly inland on a somewhat higher rise about a mile west across Abeleti Creek, the big old house of the Osbornes. Sandflies troublesome, even on the hill. It is the most inconveniently situated camp we have had. I feel that we are going to have to do a lot of track cutting to open up the country. We have our bulk supplies in Osborne's store, but the work of carrying the rest of the supplies and gear up the hill from a landing in the mangroves occupied until four in the afternoon, giving only enough time to rig a fly over the floor of an old resthouse next door. This will be the work fly when another one can be rigged for the boys.

Thursday Sept. 27: Much rain during the night, the drift being from inland. Some thunder with the rain. The reddish clay of the camp site very muddy this morning. A leak developed over Lionel's bed; much profanity. I usually got the leaks. Dull threatening morning; a little sun in the afternoon.

Camp rigging about complete. Rus behind with his arrangements. I am established in the kitchen of the old resthouse. Traps are out tonight.

Lionel got on the radiophone with Samarai this morning. The "Muniara" is due to leave Woodlark for Samarai about 5 weeks hence. If we can get across to Woodlark from Rossel in the Osborne's new boat (we should know about this after Monday), we will be able to plan 5-6 weeks work for this island and 2-3 weeks for Woodlark. Have made out a small order of stores to be radioed tomorrow for shipment here by the "Muniara" next week, enough to see us safely over two months.

Callanan left this morning and is reported to have a tossing as he went out the passage. I hope it continues. He overcharged me for the trip. A charter rate of 20 pounds a day for three days -- a day too much, as he is on a trading voyage.







To the Osborne house for dinner in the evening; the old homestead where Mrs. Osborne, Ron and Eric live; Hugh and his wife have a thatched house close by. Old house, built in 1910, full of possessions and not well kept. Very good meal, after which Hugh showed a lot of kodachromes he has made of this area recently, and I had a few to show.

Mrs. Osborne evidently is no housekeeper, but looks well preserved for her 70 years and long residence in the country. Most people show deterioration after many years in the tropics. Eris, however, looks like an old New England Yankee. The boys are keen as can be, and living every day.

Eric informed us that, about 1921, a man named Frost, collecting orchids for Saunders of St. Albans, stayed about three months at Abaleti. Collected some thousands of Dendrobium atrovioleaceum, the "Rossel Island Orchid" which I have also found on Misima and Sudest). Apparently this was the only species taken, although a fine Phalaenopais occurs there.

Friday Sept. 28: Some heavy squally rain during the night. More between 7 and 8, and about 10:30 in the morning. Fine bright -- also steamy -- day after that. Mountains now (5:30 pm) quite clear and sharply outlined.

Took a dinghy the Osbornes have loaned us and went up the river perhaps a mile to where it shallows over a gravelly rush. Water quite fresh but tidally influenced almost to my topmost point, and mangrove along the banks for the most part. Tied up dinghy opposite Naideta village (on west bank) and walked up stream about  $\frac{1}{4}$  mile. Floodbank, disturbed by cultivation long ago, and now by cattle which have run wild from the plantation (said to be only five head there now). Grassy, trampled, jalf boggy glades in the forest of the banks. Much Vatica in the forest of the narrow floodplain. An extensive, apparently flat basin beyond appeared to be occupied by second growth forest and bits of sago swamp. Collected 15 numbers, including a pink Dendrobium not seen before (photographed), and two other orchids. Probably the species previously collected on Sudest or Misima, or both islands.

Nothing in traps last night. Two boys out jacking, shot nothing Tinker, out this morning for pigeons for the pot, got a Nyctimene geminus, and a large one, the first juvenile of this we have collected so far. Rus sees no difference between the Nyctimene we have been getting from the beginning.

All but the mammal and plant boys opening up trail

Lionel put in our stores order to Samarai this morning, also spoke on the radio-phone with Reg Neate of Woodlark who is on his way to Australia in six weeks business trip. (It is reported that two mining engineers from Australia recently spent two months inspecting a big deposit of iron ore on Woodlark. They were in the wreck of the "Kari".) Neate offers us the use of a furnished house with plunge bath, refrigerator, etc.

Was visited late this afternoon by VC, Guadua, of the Saman group of hamlets somewhere west along the coast. Said he came in a whaleboat. Clean, little, toothless old man. (Our local VC is anything but clean) Told Guadua that that probably we would later sing out for carriers from his villages. His book gives "potential labor" as 40 males and 35 females.

Saturday Sept. 29: Rain after daylight kept me in camp until 8:30. Some light showers in morning. Fine afternoon.

Botanized in a new cut trail going into the hills in about a northerly direction from camp. Good rain forest, but with few big trees and an undergrowth very poor in species. Vatica common on the ridge. Also two slender feather palms (one fertile and collected, and a very beautiful fan palm which occurred mostly as a juvenile.



In the morning I was out with the old man and his wife. They were very kind and gave me a very good breakfast. The old man was very well and his wife was very well. They were both very happy and I was very happy to see them. I was very happy to see them and I was very happy to see them.

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The botanical outlook for Rossel, the New Guinea ultima thule, fabled as being so "different" does not look bright at this stage.

A cuscus was shot last night. by Lionel. Nothing in traps. A slow start in mammals.

Quit work about 4 o'clock to go on the "Yelangili" out to the bar. Got stuck on soft sand when nearly over, and the tide had started to run out. Engines run very well and the ship handled nicely. She is on the sand, with perhaps no more than a foot of water at low tide until tomorrow evening.

Sunday Sept. 30: A change in the weather pattern. Only small scuds of rain through the morning; more or less cloudy afternoon; no rain last night (it has been coming mostly in a couple of hours after dawn). SE continues.

Took the dinghy and as far as it would go up a right-hand branch of Abaleti Creek on which the Osbornes say there is a waterfall Over 100 feet high. Found vestiges of an old track, which crossed and recrossed the creek several times, the crossings becoming more and more difficult for wading as the bottom changed from gravel and shingle to hard slippery, loose small boulders. Did not get within hearing of the waterfall, and collected very few plants.

Nothing in traps again. Jacking by the boys last night yielded a cuscus of purplish-gray color, recalling some that were shot on Normanby. A boy out after pigeons bagged a Pteropus conspicillatus from a tree.

The Yelangili was got off the bar and safely to anchorage on the rise of the tide in the afternoon.

Monday October 1: Slight showers through the morning; afternoon mostly overcast; Very heavy rain for hours in evening and during the night; some thunder with start of the rain.

Completed the botanical examination of the circular track the boys have cut on the slopes immediately to the NE of camp. Forest is well grown and good to look at, but produces for me very little. Practically nothing in flower or fruit. Very poor undergrowth as regards species, even in the gullies. Collected the common, very tall fan-palm of the ridges (Livistona?). Another interesting plant was a small Barringtonia? with very big, clustered leaves and showy pink flowers.

Nothing in traps. No jacking to-night. We three whites went to the Osbornes for dinner, to celebrate the trial run of the Yelangili, carried out in the afternoon. The rain prevented the boys from going out.

The Catholic Mission ketch "Morning Star" came in this afternoon with cargo for the Osbornes and with Father Earle and McGhee on board. Earle is stationed at Jinju, a and the NE side of the island. Name of the station locality properly Njin-njiu. Rainfall records have been kept for three months past. Fifteen inches in September, and only three rainless days. Twelve to fourteen inches in the two previous months. Much more rain fell at Abaleti, the settest spot on the island. Eric Osborne admits a mistake on the part of his brother Frank in settling at Abaleti. It should have been Bamba, the best anchorage on the island, with a good shore for a slipway, and good soil for coconuts, Abaleti plantation is poor,

Rain prevented our getting home and we slept at the Osbornes.

Tuesday October 2: Heavy showers soon after dawn, and again in the afternoon.

Had to stay in camp to look after yesterday's plants and insects (a big catch lighttrap catch last night). Sent the boys out to collect in the morning but they did not get much.



The following is a list of the names of the persons who were present at the meeting held on the 1st of the month.

1. Mr. J. H. Smith, President of the Association.

2. Mr. W. H. Jones, Secretary of the Association.

3. Mr. A. B. Brown, Treasurer of the Association.

4. Mr. C. D. Green, Chairman of the Committee on Finance.

5. Mr. E. F. White, Chairman of the Committee on Education.

6. Mr. G. H. Black, Chairman of the Committee on Literature.

7. Mr. I. J. Gray, Chairman of the Committee on Art and Science.

8. Mr. K. L. Hall, Chairman of the Committee on Music and Drama.

9. Mr. M. N. King, Chairman of the Committee on Physical Education.

10. Mr. O. P. Lee, Chairman of the Committee on Social Science.

11. Mr. Q. R. Scott, Chairman of the Committee on History.

12. Mr. S. T. Adams, Chairman of the Committee on Geography.

13. Mr. U. V. Baker, Chairman of the Committee on Natural Science.



Nothing in traps last night. See note above on jacking. Results in mammals so far are poorer than at any other camp. Opportunities are not being fully exploited. Social doings in connection with "Yelangili", which we have felt obliged to join, have interfered two nights with bat shooting and jacking. But more traps could be put out, and no bat net has been rigged yet. We have been here six clear days for, I think, four mammal specimens.

Lionel left about 6 this evening with Hugh Osborne on the launch "Weiwei" for Jinju and Mt. Rossel. Hugh is on a regular trading trip. Jinju is about three hours from here. Lionel after an examination of Mt. Rossel for a camp site, will probably walk back across the mountains to Abaleti.

Wed. Oct. 3: Rain beginning about 6 am delayed my start into the field. Torrential downpour from about 11:30 to 1 o'clock. Showers at intervals during the afternoon.

Had a good morning - before being forced in by rain - on the ridge to the SE of camp. Collected in both primary and second growth forest. Several subcanopy trees, including two nutmegs, found in fruit in the former, and a nice little gregarious Selaginella (found also on Misima and Sudest, if not the other islands) on the ground. The second growths Alphitonia, Commersonia, a Macaranga and a Glochidion among expected small trees. Also there were a Cupania ? and what looked like a small-fruited Acronychia. Gathered a few seeds of the big fan-palm, which, if I can get enough to make a shipment worth while (we are supposed to split with the PNG government), I will send to the Fairchild Tropical Garden. This is the only good palm I have seen on the trip with ripe fruits,

Nothing in traps again. Four cuscus and a Nyctimene shot by the boys, Rus and his boy, jacking on a trail not seen in daylight, got lost. Much shouting on the mountainside. No mammals shot or seen.

Thursday October 4: Much rain in the form of heavy showers again today, finishing only in late afternoon. Abaleti floods too fast for a canoe to be paddled against it.

The rain, falling every day hampers field work. Hugh took their dinghy on his trading trip round the island, leaving us with what we can get in the shape of canoes for water transport. The only canoe in the area, apparently, to carry three people has a waterlogged outrigger and is dangerous to use. Isulele capsized in it last night. Then he failed to tie it up properly and it got adrift, to be picked up in damaged condition at the mouth of the creek. The transport situation is also hampering. On Sudest we found small black leeches rather troublesome in wet weather, at least at the mountain camp. They would appear to be absent from Rossel. Here, too, I have felt no scrub itch. I think it was on Sudest. Certainly it was at Mt. Sisa on Misima,

Again nothing in traps. Nothing in a bat net set a night or two ago. One Nyctimene shot by Tinker, who also brought in a ~~lx~~ pale brown Melomys? with white belly. This he said he had shot, but it carried the marks of a trap. Someone's trap line was robbed,

Lionel returned from Mt. Rossel, walking across the island from Jinju and examining the mountain on the way. Had a bad time in the rain. A guide showed him Osborne's camp site on a ridge only a few hundred feet from the summit. Just about enough room for a camp of our size. On this side of the mountain, about 20 minutes from Osborne's site, and at lower elevation, a place was pointed out where two white men had camped, collecting butterflies. Obviously the camp of the Eichhorns, who were here in the early twenties. This offers us an alternative camp site. Other sites are available below Osborne's on the Jinju side. Lionel reported leeches troublesome on the top. Conditions mossy there and timber small. Judge that ten days will be enough there. The scope appears limited.







Friday October 5: Beautiful fine day, the only day, I think, we have had here without rain. No rain last night.

Took advantage of the day to climb a peak which rises about 1000 feet to the ENE of camp. Was out nearly six hours. Followed a trail cut by our boys. Good rain forest with a scattering of very big trees; undergrowth very poor; found no big tree in flower, only a few in fruit. A Metrosideros? with reddish ~~yellow~~ young leaves is a common big tree on the ridge crest of the top. Also collected, in fruit, a Podocarpus of the noriifolius group. Smallish trees of an oak occurred in some abundance on top, but all were sterile. My chief reason for climbing the peak was to collect the oak.

Nothing again in traps. Rus and the boys jacked last night and got nothing. A note. Another Melomys came in, however. A young one grabbed by hand by Tinker at the

Neglected to record yesterday that Lionel brought in five specimens of a small Hipposideros swatted in a rock crevice in which he sheltered from the rain on the way down from the mountain. Hugh, returning from his trading trip, brought 16 more collected somewhere in Yongga Bay. The Melomys here (if it is Melomys) is a very different one - a single specimen - on Sudest.

Ron Osborne had dinner with us. Tomorrow he will take Lionel to Loa or Asele Island, off the eastern end of Rossel, to trap and shoot. Rats are reported to be very plentiful there. The Osbornes have most of the island planted with coconuts.

Have decided to spend what time we can at Jinju after we work the mountain. It might be better for mammals than Abeleti has proved to be. Arranged this morning for Hugh to take (us) round to Jinju, for a start up the mountain, next Thursday. This afternoon there was radio news that the "Muniara" has been delayed in sailing from Samarai and will not be here until about tomorrow week. For some reason, not clear to me at the moment, the Osbornes appear reluctant to transport us to Jinju until after the Muniara has been here. I think they want to spend all available time in trading on other parts of the coast.

Have been reading "A wreck and scenes of cannibalism at Rossel Island in the Louisiades Archipelago? Me, enesia," by V. de Rochas published in the "Tour de Monde" at Paris, 1861. a translation on loan from the Osbornes. De Rochas claims to have visited Rossel with the rescue ship which was sent from New Caledonia to pick up the Chinese (327) of the three-master "Saint Paul", which was wrecked in 1856. He tells a gruesome story of stacks of pigtailed and clothing found at the spot where the Chinese, in small boats, were alleged to have been killed. Have also read a typewritten account, by Frank Osborne, of the "salvaging of the 'S.S. Inaho Maru,' a Japanese steamer of 2250 tons which went ashore on the barrier reef near Adele Island on 5 January, 1922.

Sunday Oct. 6: Heavy rain for some time ending at dawn. Another fine day after that, with heavy showers, however, up the valley. Cloud drift from east. For some days now the sea has been calm, with not much break on the barrier reef. We seem to have come to the end of the strong SE winds, and to be entering the doldrum period between the two main seasons.

Worked in camp while the boys did a morning in the field. Again not a thing in traps, even in some set on the Osborne's store across the river, which is said to be well populated with rats of some kind. Nothing jacked last night. Nothing on the mammal table this morning.

I find that it will not be convenient for the Osbornes to take us to Jinju until after the departure of the "Muniara." They wish to collect all the copra they can, by trade and from their plantations (right aggregating about 300 acres) before the boat comes.

Lionel and Hugh departed about mid-morning for Adele Island in the Wei-wei."



REPORT OF THE



Turned back from somewhere inside the lagoon with a big green turtle they had caught. We had some of the meat and liver for luncheon. Liver has a peculiar texture and I did not eat it.

Sunday Oct. 7: No rain last night, one heavy shower about mid-morning. Cloud drift from about NE in early morning.

Had the use of Osborne's small launch "Pani-pani" (meaning every village in Rossel talk) as far as the head of tidewater in the river, then walked the best part of ~~the way~~ a mile upstream on the righthand bank. Cattle track on quaggy grass near the river. Collected twenty numbers, my best day on Rossel so far, but nothing very exciting. There was a rheophytic Ficus lily like a species on Sudest. A nutmeg had great orange fruits 5 cm in diameter. Found a single plant of an orchid like Dendrobium undulatum, but the flowers were evenly colored brownish-yellow, with straight segments and pseudobulb distinctly swollen.

Nothing in traps. Three Macroglossus in two nets now set. A phylanger and a Nyctimene shot last night by Kim. Lionel returned from Adele Id. with 26 Rattus ruber. A very heavy infestation of these rats he says. Caught most of his take in one trap, placed a few feet in front of him, and shielded from light by momentarily placing a hand over his jacklamp.

About thirty acres of overcrowded coconut plantation on Loa and Adele. Osbornes work it with Rossel labor on a 15/- a ton piecework basis. The party returned with a fine blue parrotfish, a travajjy, and a good kingfish. Also the flesh of several giant clams, of which the boys made soup.

We dined with the Osbornes. Eric says that cannibalism was practiced on Rossel to as late as about 1910. to his knowledge. It was the regular thing after the death of a chief. Certain people were destined at birth for this purpose. Borrowed from Mrs. Osborne "Rossel Island, An ethnological study", W.E. Armstrong, Cambridge University Press, 1928. Armstrong, of Cambridge, spent about two months on the island in 1921. Eric tells me he had a cork leg, which fell to pieces when he visited a camp Eric and his family near the summit of Mt. Rossel.

Monday Oct. 8: Light showers in afternoon; apparently heavier ones out at sea. Mist or rain on tops of the higher mountains in afternoon and late morning. SE cloud drift but little wind here, and the day was uncomfortably hot in the field.

Went up the river again, collecting two species of tree-fern on banks barely above the tide, then climbed a ridge off the east bank past a hamlet of two houses (where the VC lives). Oaks there at only about 100 feet above the river. Much of the very clayey wet ground had been cleared and has grown to rather haed-wooded trees (Achronychia etc.) and in places overrun with a scrambling Gleichenia. Stone platforms at the hamlet, and the top of the ridge appeared to have been levelled at some time, perhaps long ago.

Not a thing in traps. A Dobsonia and a Nyctimene shot by Rus (the Osbornes with him) last night, a cuscus by Liklik. In the morning Rus and Lionel went on a dugong hunt in the "Pani-pani" with Hugh and Ron. A very big female (not measured) shot by the Osbornes with a .305 rifle. One of three of the animals seen off the point of land just west of Abaleti (a big herd said to be there, coming in to feed on the shallows behind the reef with the rising tide). The dugong carried a fully developed foetus about four feet long. The skull of the female, her genital parts, and the head and genital parts of the young one (female) kept. Steaks eaten for the evening meal were better than I expected.

Tuesday Oct. 9: No rain; mountains clear most of the day; light SE wind. The driest spell of weather since we have been here. For once our track down to the landing is not muddy. Hugh tells me that a change of tides from night to day highs indicates that the SE season is over. There are two tides



From a back view perspective, the bird is seen to be in a position of rest, with its head turned slightly to the right. The bird's body is dark, and its wings are folded against its sides. The background is a light, textured surface, possibly a wall or a large rock.

At the top of the page, there is a line of text that appears to be a title or a heading, though it is difficult to read due to the orientation of the page.

The bird is shown in a side profile, facing right. Its head is turned slightly towards the viewer. The bird's beak is long and pointed. Its eyes are small and dark. The bird's feathers are dark and appear to be well-defined. The bird is standing on a light-colored surface, which contrasts with its dark body.

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Night catching at the lamp has been good as a rule. A lot of spiders have been brought in by the boy. But results have been poor in butterflies and Odonata. The better localities for these insects are difficult of access from camp. Abaleti Creek divides the locality in two. We have had an Osborne dinghy only part of the time. The one canoe we can hire or borrow with any certainty will hold two persons only.

NO BUTTERFLY OCT. 10







Thursday Oct. 11: A very wet day. Heavy showers from before daylight through afternoon. *As per note on the "Waei-Waei" at 3 P.M.*

Left Abaleti with Hugh ~~Wheeler~~ and arrived Jintu 5:40, just before dusk. Took the inside passage. Calm water except in one place, probably opposite break in the reef, and mostly very shallow. Intricate pilotage. Touched bottom a couple of times. Good small wharf of bush timber at Ginju. Good rest house among coconuts and mangoes on the beach, oval in shape, with ~~sawn timber~~ floor, and fan-palm roof. (Were met at the wharf by Brother Cantwell of the Catholic Mission. Father Earle was at Abaleti to meet "Muniara") who invited us to dinner. Excellent meal nicely served. Had table napkins for the first time in a European house in the Lomisiades. Father Earle and Brother Cantwell live in a thatched 3-roomed house with board floor. Three sisters apparently have similar quarters. A convent of permanent construction is now being built. The Mission was established, I think, in 1947.

Did some sorting of cargo after dinner. Very heavy rain while we ate. Hugh departed for the next bay east along the coast. He would not have had enough water to get away from Ginju at low tide. The "Waei-waei" needs a good time for the trip between Abaleti & Jintu inside the reef.

Friday Oct. 12: A threatening dawn. But as carriers were waiting, decided to leave for the mountain. The usual delays while the carriers assembled — Some from Ginji, some from East Point, some employees of the mission. Got away with 34 loads at 7:25. Crossed a mangrove slough behind the rest house, then began to climb through a small coconut plantation of the Osbornes (*Spathoglottis* flowering among the palms). Primary (also secondary) forest immediately above the plantation. Soon a new garden of good size, being planted mainly to taro, and unfenced. Mostly second growths. Then to DAMBENI hamlet at about 600 ft. and overlooking the ~~Barrier~~ reef and Heron Island. Fairly steep slopes to that point. Rested 15 minutes at Dambeni (35 minutes from Ginju). Then began a long gradual ascent through fine tall forest at round about 1000 ft. forward 2-3 old village sites with coconut and betelnut palms and run-out bananas. Good government road showing evidence of long use. Crossed several small streams, running murky from rain this morning. At 9:15 rested from a point where a saddle in the central mountain ridge could be seen several hundred ft. above us. Some deep rock crevices from which Lionel collected *Hipposideros* on his survey trip. Heavy rain kept us there till 9:45.

Beyond this rest place a little, after crossing a fair sized stream, the track divided, the regular route to Abaleti going right, an old, little-used path to the left. Followed the latter. This soon split again and there was confusion and indecision among our people as to which branch to take. The right hand one was followed and it soon ran out to nothing. Made our way back to the other branch and after a long, fairly stiff climb, reached the saddle on the mountain at 10.50. Evidence of a frequent closed blanket (??) some 200-300 ft. from the crest. On the top Lionel had partly opened up a camp site. The ridge was narrow, and rough with rocks, but decided to camp rather than at another possible site about 500 ft. lower down, in tall, gloomy forest. Sent word back to the carriers and Rus, who were waiting at the alternative site, and we had a fly temporarily rigged before more heavy rain began to fall.

During the afternoon the clouds lifted for a time and we had views of Loia (Adele) Id on a bearing of 112°, and of the summit of Mt. Rossel rising about half a mile away and 400-500 ft. above us on a bearing of 25°.

The summit a peak of very limited scope — like Mt. Riu or Sudest. From camp the main ridge curves SW and W, rises only a couple of hundred ft., and appears to broaden. Our best collecting for plants will probably be in that direction.

Our carriers were a pleasant, willing lot. They fell to with knives and axes. They hurried to open up views from camp. Few of them had been here before. We gave them a feed of rice after their 4/- payoff, and they departed about 3 o'clock. Some of them quite tall men for this part of the world. One, a councillor from East



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and perhaps of chiefly blood, was paler skinned, short, with Neanderthal ~~mask~~ head, hair, and very prominent protruding buttocks. A friendly, intelligent man.

Eric Osborne and his family, about 30 years ago, camped where we are now. His clearing is marked by tall tree-ferns, and an illegible name cut in the bark of a tree. Our older natives told us that a government man named ~~SAIKEN~~ Jamison once camped here, and that a "good" track, now overgrown, leads to the summit.

The mountain villages on our route were abandoned by government (no doubt ANGAU) orders during the war, we were informed. The people moved down to Jinju but they still use their old garden grounds;

Saturday Oct. 13: Was kept awake much of the night by condensed mist dripping on my tent from a tree overhead. Light showers began toward daylight lasted to mid-morning Ridge, peak, then clear most of time to mid-afternoon. At other times mist, driving on a strong wind from about east over the saddle.

Collected a few plants about camp while the boys put in a work, tool and storage shelter. Palm trunks and tying material (Calamus; Fragillaria) available in plenty. Other boys doing the regular jobs of rigging camp - work and storage facilities, latrines, etc.

Rus unwarily trod on a slippery <sup>pole</sup> ~~job~~ in camp yesterday, fell and hurt his back- not very badly. He spent today lying down. ~~out~~ this evening by his boys.

Sunday Oct. 14: Very heavy rain at daylight, followed by a dark, misty, blowy, showery day. Bad for field work. Collected a few plants at camp. then followed the track toward Abaleti. Track went along the side of the ridge, losing altitude steadily. Forest <sup>all over</sup> (ca. 70-50 ft. there and much undergrowth. Conditions wet; visibility bad) found and, collected with a few ripe red fruits, two species of substage palms with feather leaves. An apocynaceous canopy tree with very fragrant big white flowers was especially good.

The old story of nothing in traps. Lionel and Kim jacking last night, shot three cuscus, a brown Melomys and a MacroGLOSSUS, besides picking up an amathystine python 7 ft. long and a big brown tree frog.

Camp rigging, which because of the exposed position and rough rocky ground, has been a bigger job than usual was completed today. About half dozen men and boys paid us a visit bringing 10 eggs (bought for 2 sticks tobacco) & 6 papayas. No rain down below they said. They did not stay more than an hour in our mist and rain.

Monday Oct. 15: Very heavy rain from about 11 PM to midnight. Completely misty sky with occasional light showers. One of the worst spells of weather I have experienced. This is the 5th day of it. The forest is saturated and dripping. Wind (a cloud drift) from NE today.

The weather kept me in camp to mid-morning, after which I made for the peak. Followed the narrow ridge and by a track out by the mammal boys, then cut beyond that to the foot of a rock face ca. 200 ft. high on the north side of the peak. Could go no further on the precipitous slopes. The rock face overhung, and being in the lee side gave dry conditions. A flaxwhite Ilova grew high on the rocks and out of reach. On trees near the rock face were one plant each of the purple tubular Dendrobium of Mt. Pabigama on Normanby (an orchid present on the mountains of all the islands we have visited) & a pale violet Bosa. Never have I seen a tropical mountain so poor in orchids, (only 3 spp. collected so far) and ferns. The Rossel flora is the poorest yet, but I am collecting plants quite new to me.

Again nothing in traps. Rain spoiled jacking last night, & only two MacroGLOSSUS were shot. In nearly three weeks on Rossel all mammals but one rat have come from the guns. Now it develops that we are running short of ammunition, batteries and bait. We can make rat bait from supplies on hand. Batteries can be



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bought in Samarai when we reach there about the end of November-- or perhaps from a trade store. Amm is a different matter. No shot smaller than three is available in Samarai. Will have to order from Australia. We came out with an ample supply of cartridges. It has been squandered on breasts of pigeons for the table, without my knowing that a shortage was developing.

Mails came by native messenger from Abaleti. The "Muniara" arrived yesterday after being missing for some days (with radio out of commission). Cash expected by me, and tobacco by Lionel, did not arrive. Lionel left for Abaleti after lunch to inquire into matters -- also I expect, to get some gun oil. This was forgotten in the packing at Abaleti and I'm not supposed to know anything about it.

Tuesday Oct. 16: No rain last night. Less mist today, fine showers and some sun in the afternoon. Wind from ca. NW. This afternoon we could hear the breakers on the surf off East Point, a sound ~~hitherto~~ drowned by wind rustling the treetops.

Botanized south along the crest of the range, cutting track for an hour past the end of the jacking track trail without coming to the "No. 1" road to Abaleti. Low forest, stunted to a scrub on some narrow crests and showing no variation in composition.

No mammals in traps. Mist spoiled jacking last night by the boys. A small *Hipposideros* caught in a bat net. This is the first insectivorous bat we have caught in a net.

Hugh Osborne came up to see us, traveling from Abaleti in three hours. After lunch he went to the top of Mt. Rossel, guided by some natives who came up from Ginju with fresh food. Council there (has) a wine bottle with the rotted remains of a note in it, left on the summit about 30 years ago by Eric Osborne. Climb difficult in two places.

Lionel returned, alone, from Abaleti about 3:30.

Three natives from Ginju brought a nice lot of sweet potatoes, papaws, pineapples, a few berries, tomatoes, greens and peanuts for which I paid 12 sticks.

Wed. Oct. 17: The first day and night here without rain. Not much mist, either, until afternoon.

Botanized to and past the waterplace gully in the valley to the west of camp. Nothing worth special remark except a big *Cataphorcalyx*, the third palm found with ripe or near ripe fruits at the camp, and the fourth on Rossel. This expedition has been poor for palms. There were few species on the other islands of the Louisiades, 6 (?) up to this time. I have not been able to collect any ripe seeds for the Fairchild Tropical Garden. This afternoon I have boys cleaning seeds of two species.

The usual story on traps. Rus and Hugh went jacking last night no results, Kim shot a cuscus. A *Macroglossus* taken in the bat net. Various kinds of bait being tried to-night-- cheese, cuscus meat, sweet potatoe.

Ron Osborne arrived at noon from Ginju, having carried timber for the mission in the "Waei-waei". Hugh left for Ginju about 2 PM, to take the coast back to Abaleti. After lunch Ron and Lionel went to the top of the mountain. Clouds spoiled the view and no pictures were taken.

Thursday Oct. 18: Another 24 hours without rain. Mist to ca. 9 AM; after that clear except for a broken overcast low enough to cut off the top of the mountain at times.



[illegible]



Spent half the morning working on specimen on hand (worked a shift on the dryer last night, things not drying well). Then, with Ron Osborne, my two botany boys & a Rossel Islander of Ron's, went to the summit of the mountain. Did the climb of 400-500 ft. in 40 minutes. Some very steep places, one, a rock face, being dangerous. I used a rope on this. We were fortunate in having good views from the top, especially of Atabela anchorage, the Gingu coast and East Point. Could just get a glimpse of Tougga Bay on the west end of the island. Left my name in a letter which Ron and Lionel placed there yesterday in a 1 lb. bottle tied to a tree with monel wire).

Mt. Rossel, 2750 ft. (does not seem so high, when on top of it as Mt. Riu or Sudest, 200 ft. down. It is even more limited in area than Riu and its flora is poorer. Top covered with a dense, rather mossy scrub 10 - 15 ft. high in which a Metro sideros (?) (sterile) & a Tomonius were the principal ~~skaxxxx~~ items. My idea of bait changing brought no results from traps. But there were good results from two boys sent out last night with a Coleman lamp to hunt for frogs. Lionel out jacking, shot a cuscus a small Hipposideros shot in camp by Rus.

Ron returned to Abaleti after lunch.

Have decided to close this not very profitable camp on Saturday. Two days ago when a Gingu counselor was in camp with fresh food, I asked I asked for 33 carriers to come up the mountain Saturday morning

Friday Oct. 19: All last night the moon and stars shone brightly our first clear night and first glimpse of the stars at this camp. Same sort of overcast day as yesterday. A slight sprinkle in afternoon.

Baptized along the track as far as Gibbon's camp towards Abaleti. Collected a few good things including a fourth species of palm for the camp and in Eichhorn's old clearing, a smooth tree Quintinia. I have on hand more material that I can dry and tonight will work another night shift with the oven.

Traps yielded a half-grown blackish brown female Melomys, first mammal trapped here (Kim the cook got it; bait was a bit of sweet potatoe; another Hipposideros in the bat net; shot a Macroglossus. A cuscus shot last night by Lionel.

The Osbornes sent up, for nailing to a tree in camp, a heavy bit of sheet lead with the history of the camp site stamped on it. The Osbornes were here first in 1909. See attached rubbing.

Saturday Oct. 20: A threatening morning with enough rain to wet the tents and flys before we could get them down at the mountain camp. I left at half past eight, to collect on the way. More than enough carriers were met traveling up the slopes soon after I started down. We had 31 loads. The transport arrived at Jinju before noon.

Nothing in traps last night. Four cuscus shot by Tinker with four shells.

Had very good collecting on the track. My best day on the island. Interesting things included a red-flowered Gemneriaceae vine (like Bignoniaceae) which I found on Fergusson and Normanby, and a fine big Marattia with tripinnate leaves. Saw oaks in the forest at about 200 meters.

Father Twomey of Nimoa, on a visit to Jinju, called at the resthouse to talk with us. Short, stocky man of open countenance, who started the mission in 1947.

Sunday Oct. 21: Heavy rain from the NE last night measured 64 points ~~last~~ at the mission. A sultry day, it seemed to me, despite a good NE breeze off the sea.

Spent nearly all day preparing yesterday's plant collection. The rest house is big enough Rus and I to work in. It already stinks of cuscus.







Rus and Lionel went jacking last night but were driven early by the wind.  
One Rattus ruber in traps.

Monday Oct. 22: Rain again before dawn. At 5:30 a great black cloud lay over the sea to the NE. Light rain through much of the morning. Thunder with this.

Botanized eastwards along the flat sandy island on which Jinju is situated, then across a mangrove flat on a bridge mainly of sawn baulks of timber to garden lands on Mabu Creek (this seems to be the big creek which heads near our mountain camp). From the gardens - bananas, taro, coconuts mainly) I went up the slopes into primary forest. Some fine tall trees, which have been cut into somewhat by the Osbornes and the Mission. Little in flower or fruit in the forest, but I collected a fine big canopy tree which seems to be a Turreea.

In conversation with the owner of the garden, I found that he had worked for Burns Philp at Madang for a year as engine boy. His brother, who lived with him and owned neighboring land planted to coconuts, had worked four years as a houseboy in a Madang hotel. Other boys of the area have worked in Rabaul, Lae and Port Moresby. This man had a good house for which he had paid the builder 26 pounds. Nearby was a small house in which the second of his babies had been born. Such a house is not used after the birth of the child. Was questioned as to what we did with our specimens. I described the Museum as something like a big school to which all people could come to see things from all over the world. In reply to my statement that in some parts we were thought to be practicing black magic, I was told that some people do not know God".

Nothing in traps except five Macroglossus caught in a net and several bats shot by Lionel and Rus (Pteropus conspicillatus, Dobsonia, Nyctimene).

Tubaga and Sipoma were sent across to Abalati for some oufens from our stock there. Left at 7:15 and returned at six in the evening. A remarkably fast trip. The journey is supposed to take about five hours each way.

Ron Osborne here this evening on a trading trip. He bought a couple of bags of copra and some trochus shell, and sold a considerable quantity of manufactured goods. The excitement of our presence has decreased the rather high output of copra by this community. At least we have spent about 20 pounds here.

Started buying artifacts for the Museum. Have three kinds of shell money and a limestick so far. Native food is coming in well. We will try to lay in a stock to take to Woodlark, where population is only a few hundreds and garden produce is likely to be scarce.

Since about the middle of last week there have been big doings at the Mission. Monsignor Doyle, head of this mission, has been here for confirmations. About 120 people have been put through. (Since the mission started something over 600 have been baptized on the island; about half the population). The Monsigneur, with Fathers Twomey and Earle, left about 6 this morning for Nimoa in the "St. Patrick".

Tuesday Oct. 23: Rain much of the time from about 8:30 to 10 this am, spoiling my field work. Weather from the NE, over the sea.

Went through the mission and over the coastal slopes. Very tall, gloomy forest in which there were a few fallen flowers on the ground, and parrots feeding out of sight overhead, but I could collect very little through inability to see,

Another Pteropus and a cuscus shot by Rus and Lionel; three Macroglossus in the net, two R. ruber trapped by a hospital boy at the mission. Nothing in our traps. I find that only the regular museum bait is being used.

Had Brother Grantwell to dinner. Plain bushman from Dalby, Queensland. Worked on farms, then as undertaker. Has two brothers in the Church lay brethren and another brother about to be ordained as a priest.



was and immediately looking for a light and was driving very fast.

Monday Oct. 22. Left at 10:30 AM. for the station. It was a very fine day and we had a very good trip.

Hotelier's office. The first thing I saw on the train was a very fine view of the station. The train was very fast and we had a very good trip.

In conversation with the owner of the station, I found that he had a very good trip. He had a very good trip and he had a very good trip.

Nothing in the station. The station was very fine and we had a very good trip. The station was very fine and we had a very good trip.

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Received very early in the morning. The station was very fine and we had a very good trip. The station was very fine and we had a very good trip.

Since about the middle of last week there have been a lot of people at the station. The station was very fine and we had a very good trip.

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Wed. Oct. 24: Very heavy rain from daylight (5 o'clock) to after 6 in the morning; 162 points at the mission. More rain during the morning interrupted by fieldwork. Afternoon fine and hot.

Went up the mountain trail as far as a new garden at approximately 50 m. Collected 10 numbers in second growths and primary forest (have 48 for three days at the camp). A curious pinnate substage tree with red cauliflorous flowers. Freak condition of thousands of short pendant (ca. 1 m) adventitious leafy shoots from a big canopy tree whose branches had been entirely stripped off by falling trees when the garden was cleared. These shoots in flower.

The hospital boy caught two more ruber in his two traps. A Pteropus conspicillatus shot by Rus. Bait changed to sweet potato and coconut today.

We have daily contact with the mission. Rus drops in there often. Today Lionel fixed their broken-down lighting plant (small Lister Diesel with injector trouble). The mission small launch "Bambino" was sent around to Abaleti with an injector for cleaning. Brought back for us a tin of flour.

Thursday Oct. 25: A rainless 24 hours. Today mostly with little cloud, and bright and hot. The evenings are warmer here I notice than at Abaleti. And every morning close to dawn I wake and have to get half our from under my blanket. Sandflies are here, but in numbers too small to be troublesome. A few usually appear, and bite, towards sundown.

Went up Wabu Creek about a mile, to where it narrowed and the hills began to close in. Tall forest broken by a new small garden clearing or two, and second growths (Piptadenia novoguineensis) plentiful where gardens had been. Sago here and there on wet ground. Taro the principal crop planted in the gardens. A fair number of bananas, some cassava, and odd plants of corn, hibiscus, etc. Have not seen any yams in this area. This seems to be a general season for burning off and planting the gardens. Trees usually clear felled. Sometimes the bigger trees are left standing, killed by fire, in the old Rossel fashion.

Again nothing in departmental traps. The hospital brought in three more ruber from his two traps. Rus has not as yet inquired as to what the boy uses for bait. Three bats shot last night by Lionel: Pteropus conspicillatus, Nyctimene, and Macroglossus.

Brother Grantwell came after dinner to play native songs for our Gosiagos on the accordion and mouth organ. Only one of the boys came out to listen. Something went wrong. It might be the local feeling of Protestants versus Catholics and suspicion of the brother's motives. Grantwell once got as far as an audition in a national harmonica contest in Australia.

Friday Oct. 26: Weather returned to strong SE. Rain threatened much of the day. A thunderstorm in the evening. Day cooler than yesterday.

Botanized up the mountain road again to about 80-100 m. Got only 11 numbers but these were mainly good trees of the primary forest. An Erythroxylon, the first on the trip, among them.

The usual report on traps, two rats from the hospital traps. Kim, out shooting last night, got a cuscus and five Macroglossus. Previous to this, only one Macroglossus was shot - by Lionel. They are difficult on the wing. Kim waited for them to settle in a fruiting tree.

To dinner with Brother Grantwell this evening. We provided the blue pigeons for the meal. The mission has an excellent cook, but our Kim knows more about doing up pigeons. A game of scrabble filled in the evening. The game seems popular in this country.



1. The first of these is the fact that the majority of the population of the United States is of European descent. This is a fact which has been recognized by the government and the people of the United States for many years. It is a fact which has been recognized by the government and the people of the United States for many years.



Sat. Oct. 27: A considerable amount of rain in early morning, before dawn. More or less showery day. Weather from about east.

Botanized, for very little, the hills on N side of the valley of Mabu Creek. Have seldom seen so little flowering and fruiting in a forest. This is annoysome for plants. The flora is poorer than that of any of the other is, we have worked.

A mail in this afternoon by the mission boat "Morning Star" brought a new Leica camera from The National Geographic. The focusing gear failed long ago in the camera I brought out with me. Tomorrow will be our last day in Jinju and I will probably spend it largely in trying to get close-up pictures.

The same results, or lack of results, from expedition trap lines. The hospital boy brought in only one ruber this morning (he has been using coconut as bait). Yesterday, however, the Methodist teacher, not to be outdone, asked for two traps to set in his house in the village. This morning he brought in 13 ruber and two Mus! He did not say how long he sat up to make the catch.

Lionel this morning, with a local guide, investigated a bat cave we have long known about. Really a crack among jumbled rocks, about 20 minutes up Mabu Creek. Crack narrow and hard to get into. Caught 5 small *Hipposideros* of the species we already have for the island.

Called on Father Earle in the evening (had returned from Nimosa on the Morning Star). One thing discussed was the early history of the Catholic Mission in these parts. Nothing seems to be known about the end of the Marist mission which went to Woodlark about 1840-50. Recently, however, a priest visited the reputed site of the mission and, digging, unearthed a chalice which is now in Sydney. The inference was that the priest who probably buried it must have been a bad way. There is a legend on Rossel that, long ago, a white man came to the island who made the sign of the cross. He had only a shovel, with which he leveled ground for a house. Finally he was eaten.

Sunday Oct. 28: Some small showers, and much good bright sunshine. Several severe black squalls from the East.

Stayed in camp to attend to collections and correspondence and sent my boys into the field, mainly to collect the gum tree (*Vatica*) of Rossel. This is the same that occurs on Sudest. It is very abundant on river flats and the lower ridges at Abaleti, on the south side of the island. Here it is anything but common, and, as everywhere else where I have seen it, the leaves, especially of the elder trees, are very badly eaten by insects.

Botanical collections for this camp number only 95, a poor total for seven days of field work. Herbarium sheets number 620. As previously noted this is an off season for flowering and fruiting, and the flora of the island is poor. It is especially poor in ferns and orchids, groups which generally are well represented.

Another big batch of rats (seven) from the Methodist teacher. Nothing in other traps. Ten cuscus and several bats shot last night by Kim and Tinker. Bus jacked for nothing, in early evening. The boys did not start out until after 830.

Following an announcement in church this morning by Father Earle, who has done us more than one good turn, a regular flood of artifacts came in for sale during the day. I bought shell money, pearlshell scrapers and spoons, hair combs, a nose-bone, and three types of baskets. Perhaps the Methodists will be in the morning. There is a strict non-conformist Sunday. Thought today that I would be able to get pictures of village activities, but there weren't any. There was even any cooking of food. The hamlet of Jinju appears to be straight Methodist.



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Monday Oct. 29: Calm, partly cloudy, about easterly weather.

The expected rush of methodists to sell things to us developed in the morning. I reached a stage at which I had enough ndap and nker shell money, and stopped buying. Would have liked more baskets and combs. The former, however, veru often have aniline-dyed strands woven in, although they show differences in weave and therefore probably are worth picking up.

Hugh Osborne arrived with the "Waei-waei" at 5 pm. We had the cargo ready to load at the wharf, put it on, and left for Abaleti at 5:15. We got there at 7:45. A gppd run with only starlight to help Hughie in his piloting through the reef-filled lagoon.

Tuesday Oct. 30: At Abaleti, organizing supplies, writing letters, and getting the cargo out out to the "Yelangili" at her anchorage. (The name of the ship has been changed to one word). Packed three species of palm seeds, (the big Livistona? of Abaleti and 2 from palms from Mt. Rossel) for forwarding by air package post to the Fairchild Tropical Garden. Seeds of these palms also sent to the Lae Botanical Gardens through the Regional Agricultural Office, Samarai, who is the issuing officer for permits to export living plant materials.

A fine rainless day. Sea calm. Only an occasional roar on the reef. There has been very little rain at Abaleti since we went around to Jinju.

To dinner at the Osbornes. Went aboard about 11 o'clock.

Wed. Oct. 31: Left the anchorage at 5 am. A hurricane lamp had been placed on a stick marking the passage through the reef, and another lamp was burning on the verandah of Osborne's house on the hill. Still difficulty was experienced in getting out of the harbor. The sea was so calm that there was no break of water to indicate the reef.

A fine clear day, with a little cloud drift from the east. Sea dead flat in the morning. A slight ripple in the afternoon. Arrived at Bwagaoia at 3:50. In average of well over 7 knots for the trip of roughly 87 miles. Misima looked somewhat drier than when we worked there. Also there was no break of water on the rugged coral of the south coast.

We have on board 12 goats for the Neates of Woodlark. The Osbornes have too many of these troublesome animals, which do not do well at Abaleti, and they are getting rid of all they can. Both Hugh and Ron are on board for the maiden voyage of the ship. A crew of six Rossel Islanders; not seamen, but men who worked well at pitsawing, etc. in the construction of the vessel. The Yelangili is a motor vessel 60 ft. long, with 16 ft. beam, drawing when loaded about 6½ feet or 7 feet, powered with two 40 hp Lister diesels driving twin screws. Has anchor and cargo winches. Very comfortable, airy, roomy cabin with four bunks.

Were met at Bwagaoia by ADO McLeod, "Speed" Graham (i/c Native Cooperatives in the Samarai region), and a young assistant of Graham who is taking charge in the Louisiades area (Mac something). McLeod drunk, and a nuisance. Talking of quitting the PNG service and going to Hongkong to work for Chinese interests which would appear mainly concerned with trade with the red mainland. Looks like the end of McLeod. Mammal collections for Rossel totalled 179, of which 122 were skins and skulls, the rest formalin material. Only 10 species all told. Our poorest island, by a long way. The herps collection, of 137, is also small. No fishes were collected. Insects were not up to expectations; the wrong season for butterflies, it would seem; light trapping was moderately good at Abaleti and on the mountain, extremely poor at Jinju.

Thursday Nov. 1: Left Bwagaoia at 10-15 last night; were abreast of the Alcesters about 10 o'clock, where we altered course; arrived at the Kulumadai anchorage in Kwaiapan Bay at 1:30 pm. Don Neate met us in the middle harbor in a small launch and piloted us to the anchorage. The medical "trawler" Hekaha, a 65 footer, at anchor in the bay. Brought here Patrol Officer Harry Thomas from Esa'ala (Woodlark is now in the Esa'ala Sub-District) and European Medical Assistant Jock from Mapamoima.



The expected rain of the night to fall, which was forecast in the morning, did not materialize. The rain, which was expected to fall in the morning, did not materialize. The rain, which was expected to fall in the morning, did not materialize.

Mr. Osborne arrived with the "West-View" at 5:30 p.m. We had the cargo read to the ship, but it was not until 7:30 p.m. that we got the cargo read to the ship. Mr. Osborne arrived with the "West-View" at 5:30 p.m. We had the cargo read to the ship, but it was not until 7:30 p.m. that we got the cargo read to the ship.

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A fine rain fell at 11:00 p.m. Only an occasional rain on the reef. There was very little rain at Aletti since we went around to Lijima.

To dinner at the Osborne. Left about 11:00 clock.

At 10:00 p.m. left the anchor at 5:30 a.m. A hurricane lamp had been placed on a stand marking the passage through the reef, and another lamp was burning on the veranda of Osborne's house on the hill. Still, it is difficult to get a good view of the harbor. The sea was so calm that there was no break of water to indicate the reef.

A fine clear day, with a little cloudiness in the east. We left Lijima at 8:00 a.m. and arrived at Buanan at 3:30 p.m. In the afternoon, we went to the reef and worked there. There was no break of water on the rugged coral of the south coast.

We have on board 12 goats for the feed of the goats. The goats have two goats. These from the same animals, which do not do well at Aletti, and they are getting sick. Mr. Osborne and Mr. Hahn and Mr. Hahn are on board for the main voyage of the ship. Mr. Osborne and Mr. Hahn and Mr. Hahn are on board for the main voyage of the ship. Mr. Osborne and Mr. Hahn and Mr. Hahn are on board for the main voyage of the ship.

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Our average speed from Bwagaoai was 8.3 knots. Very good. The Osbornes well satisfied with the performance of the ship. Propose to beach her upon return to Abaleti and give more pitch to the propellers, for more speed which the engines are expected to give. We had a slight NE wind on the way across today.

Kwaiapan Bay is a roomy, apparently shallow mud-bottomed harbor, with shores flat on the west side, somewhat hilly to the east, where there is a small slipway and a village of a few houses. Neate has a store at this slipway. The Neates, father and son, live in good houses on top of c. 400-foot ~~hill~~ Kulumadau Hill. A third house, which would be considered good in any part of the world, has been given to me to live in. Facilities include a refrigerator and a plunge bath. We have a fine view of Kwaiapan Bay and the mountains to the SE. Island in these parts entirely forested, but the forest all -except swampy parts - appears to be second-growths of various ages. There is indication of heavy rainfall - according to the records of the government station which used to be on Kulumadau Hill, the annual average is 165 inches.

Kulumadau is reached from the anchorage alternatively by a small creek (which we followed on the high tide) and a motor road which ends in a short causeway in the bay. The launch goes up the mangrove creek as far as the road crossing. A shed there for storage of cargo. We loaded our gear there, on a good new International 2-ton truck and went in second gear over swamp to a cyanide plant under the rise of the hill. Unloaded there and had the assistance of Neates Gosiago labor line to carry our stuff up about 800 yards of zigzag track to the house.

On its upper reaches the mangrove creek is made very pretty by an abundance of treeferns (like a species which occurred in similar situations on Sudest and Rossel); an unusual feature for a mangrove creek. Big birds-nest ferns and clinging freycinetias give another luxuriant touch. A movie man could get some nice backgrounds along the creek. Have never seen a mangrove creek so attractive.

Dined with the Don Neates. Reg, the father, and his wife, are away on a visit to Australia. The Neates have two fine strong children: Donna aged about 3, and about 1 year. Mrs. Neate (Margaret Burr) comes from a small cattle station in the Gloncurry district of Queensland. Attractive, intelligent, woman of good education, who takes much interest in her surroundings. Is well informed on Woodlark.

Don has told us about red gums (apparently a Eucalyptus) which appears to occur in only two distant localities on the island. Offers to take me to one of the places by launch. His father has a copper show there.

Don tells me that population of the island is now about 600, and is on the increase. Old reports indicate a much heavier population, numbering thousands, in the early times of white man's contacts. According to an article by "E.W. H., a Resident of Fergusson Is.", in Pim for June 1954, smallpox, introduced by repatriate cane-fields laborers from Queensland, wiped out whole villages toward the end of the last century.

Friday Nov. 2: Showery with thunder to about 8:50. After that overcast with breaks of sunshine.

Boys rigging a fly and sleeping benches for themselves and a work table for Rus. I am utilizing ~~Exxxxx~~ as work table a homemade desk with pigeon holes which I found outside the house. One pigeon hole is marked Captain.

After the rain I took a walk with Don and the Osbornes. Visited first the Neates' trade store, then the remains of the old govt. station, and Reg Neate's house, on the top of Kulamadau Hill. (Our house is on the top of the hill, but at about 50 feet lower elevation than the highest point, where Reg Neate and the old govt. station are situated. A native hospital, beyond the govt. station, was not visited. Trade store well built and well kept. Don doing the trading himself, at least today. Reg's house is old but in good condition and well furnished. A small vegetable garden contains a few tomatoes, spinach (Amaranthus) a few cabbages, and climbing on the wire net fence, passion fruit







vines which do not bear fruit (*P. edulis*). A royal palm grows with coconuts at the old Government Station (which was the Kulumadau School in the old days when the mines were flourishing).

Visited the old Kulumadau Mine, where the Neates have a battery or mill and at present are working a mullock dump at the head of the old main shaft. Using a 1 to 3 inch reduction nozzle made from a Ford truck axle. Dirt being processed in Huntington mill, corduroy concentrating tables, and Bedan pan. A Wilfrey concentrating table is being installed. Work being done by about a dozen Gosiagos. Sixty ounces of gold have been won in the last three weeks, which is very payable. The cyanide plant, which we saw at the base of the hill yesterday, is not being used. It was built to process the tailing dumps of the old mines. The dumps so old, however, that much of the gold has leached out. The climate so wet that the tailings are difficult to handle (they were carted to the plant by motor truck).

During the last war there was a military station on top of Kulumadau Hill. It was a mobile unit, carried on motor vans. At the eastern end of the island, at Guasopa, was a military airfield and perhaps other installations. Apparently it was a big show. It was abandoned, and practically all buildings and equipment moved away, soon after the drive towards the Philippines began. Only one command ear said to have been abandoned. The Neates collected five tons of non-ferrous metals from the field. Said to be a great development of roads and revetments.

Looking out at the panorama which open from our house, from west to east, one gains an indefinable impression that this island is more a part of New Guinea than those of the Louisiades. Perhaps it is the gentle contours of this west end of the island rising to mountains in the distant east giving a feeling of broad spaces.

Saturday, Nov. 3: Threat of rain from a thunderstorm after lunch, but none fell in the 24 hours. The Oldduse Range to the east gets much rain which does not reach us. Hot day on the cleared parts of the hill.

Followed a track in the direction of Deloaias Village (Decoyas of the 1-mile map) for over a mile, where we were in tall primary forest on the broad crest of a ridge. Forest has a different structure to, I think, and we have encountered hitherto on the trip. There are many large canopy trees, usually well buttressed at the base, but no continuous canopy, such as is usually present in tall rain forest. Ferns (*Blachnum*, *Nephrolepis*, *Seleginella*) provide a dense ground cover 2-3 ft. high, at least as far from the track as I penetrated, a matter of only 20-30 yards. A fair-sized *Cyathea* is a common and conspicuous tree-fern in the primary and secondary forest. Not a rich forest by any means, but I collected 14 members. Nothing of great interest.

Another social evening last night. Dinner at the Neates, then a showing of Kodachrome slides made by Hugh Osborne and myself. Boys out jacking got one *Pteropus hypomelanus* between them. Six bristly brown *Rattus* in the boys' traps; a big brown skink in Rus'. He has trapped very few mammals on the trip - I doubt if more than twenty in the 7 months. The natives say that the cuscus of the island is spotted. *P. orientalis* is recorded from here, in an endemic subspecies, but not *maculatus*. Also, accounts would seem to indicate that *Dactylopsila* is here, as well as *Petaurus*. The M.V. "Lochiel" arrived today with cargo and mails from Samarai.

Sunday Nov. 4: A shower just before daylight; several slight ones scattered in AM; many in afternoon leaving fog in the valleys and at times on our hill. Wind back to light SE.

Botanized a mile to 1½ miles along ~~the~~ an old vehicular road which runs SE to Busai, an old mining center 3-4 miles distant. Country a jumble of small ridges and hillocks, all covered with secondary rain forest. Practically the whole area appears to have been worked over for alluvial gold. A few tall trees, including breadfruit. An *Aleurites*, like *moluccana* but plain green on the under side of the leaves, collected. All the tall trees could be old secondary. These forests carry a great abundance of coarse but mesophytic forms on ground and trees. Many birds nests ferns and aroids on the trees. Saw only two palms, an unknown and the black palm (*Caryota*). There is



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limited botanical scope in the area seen today.

Only two bristly rats in the traps last night. Rus jacked unsuccessfully; one of the boys shot another P. hypomelanus. Two mine drives examined by Lionel and Rus this afternoon yielded nothing. The boys, out searching for tree-dwelling Pogonomys, pounced upon a small brown Melomys on the ground in primary forest; seems a different species from any we have.

Were visited this afternoon by Patrol Officer Harry Thomas and Medical Assistant Jock Davidson. They leave for Samarai in the morning on the "Hekaha", which has bad gear-box trouble, and will be escorted by the "Lochiel". The Hekaha has a native skipper named Tom.

Monday Nov. 5: Very sultry bright morning, followed by heavy SE rain between noon and 12:30, and a heavily overcast and somewhat showery afternoon.

Botanized past the hospital to the edge of the hill above the old wireless station plantation, but finding nothing but second growths, I turned back and went approximately north to a small stream from which the hospital draws its water supply. This about 3/4 mile from camp. Collected 14 numbers-- all I can accommodate in the drying papers. Included were two fine big Hymenophyllaceae and two great Marratias from the sheltered ravine. The stream issues from a cave which will be examined later for bats. Flushed three leaf-hanging small brown bats. They settled. I sent a boy back to camp, but before he returned the bats had gone. The single one I saw actually hanging was on the under side of a fig leaf no more than 9 inches long and four inches wide, about 25 feet above the ground.

Four bristly bats in traps, including a gray one, smaller than the others, which might be a different species. Rus shot last evening a Pipistrellus and an Ascelliscus, the latter very small and possibly from the species taken on other islands. No results from jacking (a Pteropus shot by Rus but not retrieved). Lionel this morning examined several mine drives and other holes in the ground for bats. He found nothing. An old Goodenough native named Jack says he knows a big cave, handy to camp, full of bats.

The "Hekaha" and the "Lochiel" left for Samarai at 6:45 this morning.

Rus went to bed in mid-afternoon, nursing a chill.

Tuesday Nov. 6: Some sun before mid-morning. Day generally overcast, hot and very muggy. Worked without a shirt in the afternoon. Wind, what there was of, from the NW.

Worked about 2 1/2 miles along the Dekoias track for very little. The forest very poor in species. A few big trees or lianas dropping flowers, but they, for the most part, could not be spotted for collecting. Day too dull; forest too tall.

Rus much better after taking penicillin; did some work on mammals. An excellent day for this department. Kim the cook, who always has out a dozen to 20 traps, brought in the second Melomys for the island. The boys, shooting last night, got a Phalanger, two Dobsonia and Petaurus. Lionel shot at dusk the second specimen of the small bat hitherto reported as Pipistrellus. It is a sheath-tailed bat, Embellura. Today Lionel made a long excursion to a big cave which he says is distant about 1 1/2 miles to the NW. He was guided by the old Goodenough boy Billy (not Jack). Brought back 30 to 40 small Dobsonia and Miniopterus. The cave goes in a long way (Lionel followed it for "about a mile") and is described as 70-80 feet high in places. Contained millions of bats; the most Lionel has ever seen. The roof was a golden glow with the eyes of Dobsonia, 12 of which were dropped with one shot in the gamegetter. This cave is on a creek of fair size which flows past the old naval wireless station, and is not shown on the map (except for its mouth).

The cuscus is perhaps P. orientalis tullulae, a subspecies endemic on the island.







A curiously colored beast. Black and white mottled, with some yellow; the bare parts of the tail a shining black. The dorsal stripe of *orientalis* is present only as a groove in the hair. Our mammal score for Woodlark is now ten species.

This, we learned on the radio last night, is a public holiday in PNG for the ~~island~~ running of the Melbourne Cup. The US presidential elections have brought no comment from our Port Moresby Station. The big news is the British and French parachutist(?) invasion of Egypt. News of the hostilities there broke on the day of our arrival at Woodlark. The Australian young men with whom we have contact are very keenly interested, and seem prepared to go to fight if "the big tabadaes" say so. Their thoughts are of Russia rather than Egypt.

Wednesday Nov. 7: Wind still from NW. Much hot sun; a good deal of cloud; no rain.

Botanized down the track and the motor road towards the landing. Went less than a mile. Not feeling very spry today. The heat, I think, and the change of the season. The thermometer in our jalousied verandah today rose to 90 F. That is hot for New Guinea.

*Rattus ruber* in traps (plus one brought in by a native) and what we have been calling *MacroGLOSSUS* (probably *Syconycteris*), shot last night by one of the boys, brought the mammal score to 12 spp. for this camp. Three more of the mottle cuscus were jacked. Rus' chest trouble is much improved, but today he has syptoms of dysentery.

Insect collecting is good both for butterflies and dragonflies and for light trapping at this camp. A very nice assortment of butterflies and dragonflies coming in. They are more plentiful than at any other camp excepting perhaps Walkaina on Normanby Id. The light trap catch is mainly moths. There are few beetles and the very small things which usually drop into the beetles.

Thursday Nov. 8: Very heavy rain at Kulunadai this morning, following a temperature of 30 F at six o'clock. No rain where I was, on the coastal lowlands. Sun very hot there. Got sunburned.

Left at about 10 am on a trip to Lauani Plantation with Don Neate in their small launch, towing up a punt, to pick up copra. Distance about 10 miles. The plantation about two miles in from the coast, on the left bank of a fair-sized mangrove creek carrying 3-9 feet of water behind the bar. A thousand acres were planted in the pre-war mining days (much prewar) by the owners of Busai mines. The area became badly overgrown during the war. Subsequent cutting produced a very heavy growth of secondary forest trees which was not kept down. Result is that about 400 acres is now out of production. Neates work the place on half shares, employing 14 Gosiago boys and a Woodlark bossboy. Trim little establishment consisting of hot-air copra drier, copra house, bossboy's house, and two small barracks for the laborers. The boys are on a mark of two bags of raw copra per day. There has been trouble of some kind, and production is down lately. We picked up 41 b gd of export copra.

Botanized up the creek from the plantation buildings area in the launch. Went up under power and poled down. Deep, clear creek, slightly brackish with the tide. A few mangrove trees, but banks mostly lined with a gregarious, amphibious *Pandanus* with clustered smooth red fruitheads. This, with a big *Alcassia*-like aroid, climbing *Stelochlaena* ferns, the aquatic fern *Diplazium esculentum*, and floating beds of *Pistia stratiotes*, *Lippia*, *Polygonum*, and *Meriophyllum*, gave the floating beds of *Pistia stratiotes* ~~the~~ creek a very lush appearance. Quarter to 2 mile up, we came to the head of the creek. It bubbles out of the coral limestone country rock according to Don. This was covered by waters backed up by the tide. Hanguas grew here. Collected a most unexpected lot of about 8 to 10 aquatic and amphibious plants. Did not get back to camp until 7:30.







At Neato's slip and storehouse at Kropan, on the east side of Kwaiapan Bay, I photographed, in bad light one of the three big sailing canoes which arrived this morning from the Egum Group of islands. Photographed another of the canoes under sail in the bay. Could see not a thing of European manufacture on the canoes: mat sails of the rectangular type used in the Calvados Chain, native twisted rope; sail hung from a sort of gibbet arrangement on the mast. The canoes brought  $3\frac{1}{2}$  bags of copra to sell (worth 2/5/- per bag). The Egums are out of tobacco, hence the voyage, carried out on a fair wind. They are also going to dive for some sort of shells (probably armshells). The Egums are an atoll group about 50 miles SW from Kulumadau. Population ~~about~~ 70. Nine men and two small boys came on the canoes today. The Egums are in the lula circuit. They voyage from their islands to Kulumadau, but following the loss of a canoe and six men, three years ago, they have not participated. There was one survivor from the lost canoe, a young man who was in today's group. He floated for 12 days on a bit of wreckage before picked up. The Egum canoes are made at Gawm Island, in the Marshall Group. Big, thin-planked, broad, open craft with heavy outriggers. One I measured by placing was about 40 feet long.

A couple of small bats shot at camp by Rus last night. Lionel, walking out to Dekoias Village in the afternoon, and jacking back, collected Petaurus and Nyctimene geminus. These additions bring the collection to 14 species for the island.

A big row in the boys' camp tonight - the first we have had on the trip. The three Morima boys, Isulele, Liklik and Taugova tackled Kim the cook Isulele using a heavy ebony stick in the attack. The trouble started over a limestick and a string of beads, which the cook thought one of Morimas had stolen. The cook made bad talk about the sexual habits of their mothers and wives and it was on. Lionel, with me in support, broke up the brawl, and somewhat damaged the Morimas with his fists. Knives and axes were lying all over the place but no motion was made to pick one up.

Friday Nov. 9: Sent my boys out in the morning while I prepared yesterday's collection. They did not do too well, so in the afternoon I, too, did some collecting near camp. For the week ended today I have three numbers under the 100 mark which I considered good average collecting for plants in a rain forest area.

Nine mammals all told last night, including Rus, new for the ~~ix~~ island, and two small bats netted (with a butterfly net) in the house. The Petaurus jacked by Rus. The Petaurus jacked by Rus. Yesterday an Emballanura was caught hanging under a leaf of some kind in the rain forest. ~~examined~~ examined another hole in the ground and went to the old naval wireless station to hunt for bats. No results. The old station said to be a very large, massively built concrete structure. Built in 1914 its range was to Townsville!

A message came by radio today advising that Reg and Mrs. Neate will be leaving Australia for home on the 24th. At that rate it is not expected that they will arrive in Kulumadau until about December 4th. That is much too late for us to think of staying on the island. Will begin Monday on trying to make arrangements for a boat to pick us up earlier. From what I can see now, we will be ready to leave Woodlark after about the end of next week.

Saturday November 10: Dull, overcast day. Air movement from SW. Heavy rain for over an hour in late morning, accompanied by thunder.

Set out for the old mining center of Busai, about 3 miles SE of here, but owing to the rain had to turn back before reaching it. Crossed three creeks, and must have been close to Busai. More big tall trees in the forest towards Busai, but it is still a very poor forest, much cluttered by ferny undergrowth. Collected my first palm for the island: a rather nondescript feather-leaved species.

Left camp before mammal results were in this morning. Rus left with Lionel on a two day excursion to Kekoiias, Taurai, and Mt. Kabat, primarily to hunt bats in caves, so I have no tally for mammals (they are in the bottom of the household icebox). Our personnel, excepting the cooks and my two boys, carried the party as far as Dekoias. Local carriers would be taken from there.







On the radiophone this morning Don Neate, acting on his own initiative, proposed to Steamship Trading Co, of Samarai (Dickie Paul, manager), that they send the Lochiel out to pick us up. Don will be short of food for his labor before a boat arrives with his father and mother), Reply was that the Lochiel would be sent on charter; Paul would not consider sending her with the needed foodstuffs, and to load copra for the return voyage. This would be very costly for us. Paul skinned us in 1955 when we got in a jam for boat transport.

To dinner with the Neates. Arthur Dawkins, the other white resident of the island, was expected for the weekend, but did not arrive. Dawkins, who has a native or halfcaste woman and a family by her, refused evacuation during the war. He has lived on Woodlark for many years and is now an old man. Has a coconut plantation of about 250 acres on Lauani Creek, and I think another property on the east end of the island.

Sunday Nov. 11: Another overcast day. Rain began at 10:45 am and lasted through most of the afternoon. Misty after the rain. Weather from SE. Radio news from A baleti that the weather is rainy and a bit rough there and at Nimoa. Evidently a general disturbance. Botanized down the slopes by direct track to the old wireless station of World War One, a distance of about 1 1/2 miles. Returned by the road probably about 2 miles. Got very little for my walk, and getting caught in the rain. Primary tall forest clothes the slopes, which, like the flats, are of coral limestone. But it is a poor forest, with broken canopy and much encumbered with fern undergrowth. (*Nephrolepis*, *Selaginella*, etc.) The ground is broken in uneven little ridges and depressions which look in some places like sinkholes in the limestone. The old wireless station is in a fair-sized, long abandoned coconut plantation still owned by the Robinson River company. It is on the western plain of the island less hillocky coral limestone formation. A highly finished, reinforced concrete establishment of two buildings - powerhouse and bungalow. High walls, 15 inches thick, many architectural flourishes. Walls of the powerhouse decorated with a scroll and swastika design in well executed blue paint. No sloppy war job, this. The builders and designers must have reckoned on it lasting a hundred years. Buildings now hidden in a thicket of guava and lime trees, from which a few mangroves protrude. Around this is a large grassy area still open. Did not see a few cattle which are said to graze here.

Rus returned in the rain about 4:30pm with his boy Isulele and one local carrier. They found no caves at Dekoias. They were told there were none at Mt. Kabat. This morning they walked from Kaurai village (they camped there last night in a very dilapidated rest-house) to the south-east side of the south-east side of Kaurai Lagoon. Lionel took a canoe from there to examine a cave on the north coast. Rus returned to Kaurai village and camp. Walking distances: camp to Dekoias, Lionel 1 1/4 ~~miles~~ hours, Rus 1 1/2 hours; Dekoias to Kaurai 1 1/2 hours Lionel, 1 3/4 hours Rus. They did a bit of jacking last night but got nothing; a big *Miniopterus* shot at dusk. Lionel will return tomorrow.

Don talked with the Osbornes this morning. They leave Abaleti for Port Moresby on Monday 19th, via Nimoa, with the women and children on board. They offer to come to Woodlark to pick us up if we have no other way of getting off. I don't want to ask them to do that. It would be a great inconvenience for them. The ship would be badly overcrowded with us all (5 men, two women, two children) on board.

Don insists that there are caves - burial caves - at Mt. Kabat, although he has not seen them.

Monday, Nov. 12: Dull day with little sun. Rain - light this time, but with thunder - began before noon and lasted until about three.

Sent my boys out to collect while I went on the radiophone to make arrangements for our transportation back to Samarai. Spoke with Dusty Miller in Samarai. He seems to think the arrangement most to our advantage a charter of the "Kedeluma", owned by Buntings. Don, who is only managing Kulumadai affairs in the absence of his grandfather, has left it up to Steamships to decide how much copra will be loaded on the "Lochiel" if that vessel is chartered to us. Steamships are unlikely to be liberal. So it looks like Kedeluma. I have spoken of Nov. 21 as departure date.







Made photographs of Neate's gold working and treatment plant before the onset of the rain.

Lionel returned from Kaur ai, bringing some good artifacts (betel-nut pestles and mortars, a hammer used on the bindings of canoes and houses, an armshell, etc.) for the Museum, but his bat-hunting was an utter failure. His guides (they traveled round the coast by foot) took him close to the entrance of a big cave opening above the sea on a cliff face but the tide was too high and the water too rough for them to reach the cave. The cave is in a bay about  $2\frac{1}{2}$  miles to the northwest of the entrance to Kaurai Lagoon. Lionel will make another attempt on it from Dekoias, by canoe.

A russet brown Dobsonia netted last night (a form new to the collection). One Rattus ruber in traps. Rus worked all day on specimens he left in the icebox before his departure on the abortive bathunt, and the few things collected by his boys during his absence.

Tuesday Nov. 15: Heavy rain with thunder from 10 am to noon. We are getting a pretty regular pattern of rainfall and weather. Cloudy days turning to rain by about 10-11 am, clearing early in the afternoon, the nights clear or at least not rainy. This type of weather is good for mammal trapping and jacking, anything but the best for collecting involving work by day.

From 7:45 to 4 o'clock on an excursion to the village of Dekoias, two hours of the time being spent in the Dekoias resthouse, sheltering from the rain. Gathered mainly second-growth plants from the garden area near the village. This is coral limestone country, of about 60 to 100 ft- elevation according to the military map, broken into irregular small ridges. There is perhaps some deficiency in the soil. For the second growths seem to be slow in growth and to stay in a scrubby state for some years. I did not see any gardens. They were back of the road. The village is a good 4 miles from Kulumadau. Nineteen dwellings, chief's yam house, rest house and barracks. Most of the houses have a dip in the roof and slightly pointed and upturned ends. The roof battens are poked through fascia boards, a feature we have not seen anywhere else. Houses are built off the ground and thatched with sage leaf. Many of the roofs in bad repair. Floors are of soft adzed planks (palm, which is generally used in the islands for flooring, are scarce on Woodlark).

Dekoias is presided over by a chief, Vass, who appears to be paramount chief for the western half of the island (he told Lionel he controls all the island, but this is denied by Don Neate). Vass is an imposing, clean shaven, toothless man of more than medium stature for a native. Must be very old. He held a distinguished service medal (Civil) for long service in the native Constabulary, dating from "about 1905." Came to meet me dressed in very clean white ramie and shirt, red ~~cummerbund~~ police cummerbund, and rimless Japanese sailor's cap. His house is long and sway-backed (the ordinary village dwellings are more rectangular), the front of thick adzed boards elaborately carved. A cluster of big white cowrie shells, badge of office, hangs in front of the door, suspended from the peak of the roof. Vass seems to have much affection for his withered little old wife. Called her out of the depths of the house, and she sat beside him, while I made photos.

A rat in traps last night which Rus considers different (gray with big feet). The reddish-brown Dobsonia Rus now thinks is D. remota, previously known only from the Trobriands (Rus has no description or drawing of the species, but our animal is very distinct from anything we have collected previously). This makes 17 ssp. collected on the island so far.

Questioned the Dekoias village policeman on experimental plantings of rice, cocoa, coffee and pepper which Cottrell-Dormer induced the natives of the area to make. The rice crop amounted to  $1\frac{1}{2}$  bags, which for reasons which I could not fathom, are stored in the policeman's house instead of being sold or eaten (there is no thought of using it for seed). Am not that the other crops were actually planted. However, C-D took three Dekoias boys to his agricultural school near Samarai. Their training completed, they have returned to the village, and are doing nothing. It is not a matter of non-cooperation by the people. The villagers have not been asked to do anything. The VC says that if the ag. boys like to bestir themselves, he will sing out for the village people to do the work. He has told them off for not doing their job.



Made photographs of nests, a bird working and present circumstances the onset of the rain.

Lionel returned from the bird, bringing some good specimens (bats and geckos and more). Using a hammer used on the binding of books and houses, in a small, etc., for the Museum, the bird-hunting was an utter failure. The guides (many traveled round and coast by boat) took him close to the entrance of a big cave opening above the sea on a cliff, assuming the tide was too high and the water too rough for them to reach the cave. The cave is in a bay about 2 miles to the northwest of the entrance to Kaituma Bay. Lionel will make another attempt to go to the cave, by canoe.

A washed brown bat was a better specimen (a form new to the collection). One bat was kept in a cage. The worker all day on specimens he took in the labors before his departure on the shore of the bay, and the few things collected by him regarding his business.

Thursday, 12. A very cold night with rain from 10 to 11 p.m. and a strong wind. Cloudy all day with rain by about 10-11 a.m. Clearing early in the afternoon, the night clear or at least not rainy. This type of weather is good for mammal trapping and fishing, everything but the best for collecting in-volving work by day.

From 11:30 to 1 o'clock on an excursion to the village of Dekolai, two hours of the time being spent in the Dekolai residence, sheltering from the rain. Gathered mainly second growth plants from the garden area near the village. This is coral limestone country, at about 60 to 100 ft. elevation according to the military map, broken into irregular small ridges. There is perhaps some deficiency in the soil. For the second growth seems to be allowed to grow in a scrubby area for some years. I did not see any banana. They were back of the road. The village is a good 1/2 mile from Kaituma. Whereas Dekolai chief's yard house, rest house and barbers. Most of the houses have a tile in the roof and all tiled and plastered ends. The roof battens are poked through lattice boards. Furniture we have not seen anywhere else. Houses are built off the ground and trashed with some leaves. Many of the roofs in the village are of split palm leaves (palm, which is generally used in the islands for flooring, are scarce on wood). The

Dekolai is presided over by a chief, Vasa, who appears to be permanent chief for the western half of the island, the other half being controlled by Dekolai, but this is Dekolai (Don West). Vasa is an imposing, clean shaven, toothless man, more than medium size for a native. Must be very old. He had a distinguished service medal (Civil) for long service in the native constabulary, having from 1907 to 1917. Came to meet me dressed in very plain white shirt and shorts, two enormous police constabulary, and white trousers. His house is long and very dark (the ordinary village dwellings are more rectangular). The front of the house is a raised porch, elevated about 2 ft. above the ground. A large of office, range in front of the porch, suspended from the back of the roof. Vasa seems to have much affection for his white shirt. Called her out of the back of the house, and she said she was a white woman.

A net in traps last night with the considerable different (grey with off feet). The reddish-brown Dekolai now thinks is a Dekolai, but I am not sure. The animal is very distinct from any-thing we have collected previously. This takes a very long time to collect on the island so far.

Questioned the Dekolai village concerning an experimental planting of rice, coconuts, coffee and pepper which Captain Dwyer induced the natives of the area to make. The rice crop amounted to 1 1/2 bags, which for reasons which I could not fathom, are stored in the policeman's house instead of being sold or eaten. There is no thought of using it for seed. He said that the other crops were actually planted. However, I took three Dekolai boys to the agricultural school near Samarra. Their training completed, they have returned to the village, and are doing nothing. It is not a matter of non-cooperation by the people. The villagers have not been asked to do anything. The VC says that in the ag. boys like to better themselves, he will find out for the village people to do the work. He has told them off for not doing their job.



Wednesday Nov. 14: Northwesterly weather with light rain from about 9 am to early in the afternoon. There was radio news last night that the NW season has started a fortnight early at Manus, to the inconvenience of the Duke of Gloucester, now on tour in PNG.

Sent the boys out to fell some big trees I marked yesterday, while I attended to materials on hand. One of the plants collected by the boys was a fine Tecomanthe with red flowers about 7 cm long. I don't think I have previously collected the genus east of the mainland.

Only a R. ruber in traps last night. Rus shot two small bats, we caught one in a butterfly net in the house, and the boys swatted six Ascelliscus with switches. Twice now bats have been caught in the house. They could not very well choose a worse place to fly into.

Lionel set out for the caves on the north coast about 7 in the morning and returned late in the afternoon. Got a canoe from the Dekolas people, who live a bit more than a mile inland, and visited two caves in the high cliffs to the NE of Waspimat Bay. Caves of limited extent, difficult of approach and contained only a few Dobsonia moluccensis, of which Lionel collected three by shooting. The caves of the island have been most disappointing. Fifteen caves and other holes in the ground have been examined by Lionel and only three contained bats.

Nov. 15-16: Left Kuludadau at 12:50 on the 15th for Ulcinbad Bay and arrived back at 6 PM on the 16th. Accompanied Don Neate on the M.V. Murua. His was an inspection trip to visit Madau Plantation and native village copra makers in an effort to step up quality of the product. Recently the Neates have had about 299 bags of copra condemned as not up to market quality.

The Murua is a clumsily built cutter rigged vessel of 31 feet, powered with a 21 hp Lister diesel engine. Does about 6 mph. She was built principally for trade with the Laughlins. Carries 60 bags of copra. Skippered by a Bogaboga (Cape Vogel) native named Gladstone.

A strong south east wind gave us a rather rough passage on the way out, although we were on the outside of the reef ~~southwest~~ only from the entrance of Kwaiapan Bay to Lauani Passage. The passage is wide at the mouth, very narrow and crooked at the inshore end. Many coral patches in the shallow lagoon inside the barrier reef, and quite a choppy sea there. Reached Eudua Point, on the east side of Unkinbod Bay, about 5 o'clock and anchored there in about a fathom of water. The bay very shallow, with bottom of mud and sand. Lapilapi pearl shell said to be very abundant there. Several small villages inland from its shores. We went ashore on a white sand beach, and while Don and a couple of the boat boys tried unsuccessfully for pigeons, I collected a few littoral plants (Scaevola, Cassytha, Euphorbia, Lumnitzera coccinea, Sophora). Casuarina equisetifolia plentiful behind the beach. Boys with a Coleman lamp and coconut flares worked the shallows after dark and speared a few fish for themselves. This the only good SE anchorage in the bay. Somewhat exposed at that, and the ship rolled all night.

At 4:45 on the 16th, just as day began to dawn, we upped anchor and steamed across the bay to anchor in less than a fathom of the mouth of a mangrove creek which leads in about  $\frac{1}{2}$  mile or so to Madau Plantation. This property of about 400 acres was planted, and is still owned by, a man named Hughes. Next to Lauani, it is the oldest plantation on Woodlark. Said to have been a very good bearer (the coconuts are described by Don as a sweet, orange-colored kind; the nuts small but with thick meat of very good quality), but is now much run down. The Neates have it on lease. Employ four Gosiago boys (Basima) to make copra on the west part of the area. Village natives, at so much per bag, work other parts of the plantation. I did not see any of the plantation. Inland about 100 yards from the landing place and copra house a track goes off the plantation road towards Madau village and medical post and the west coast. Followed this for the best part of a mile and collected a few uninteresting plants on the coral limestone. Tall rain forest, but few big trees, and a very poor flora, especially in undergrowth, which in some parts is practically absent. The ground rose only a few feet above sea level. Got very thoroughly loaded with scrub







itch, which an application of 612 stick repellent soon subdued upon my return to the boat. One of the boat boys shot 2 beautiful greenish ground pigeons which Don calls "Nicobar Pigeon."

2

We anchored off Madau Creek about 5:45 AM and left about 10 Okwasas native plantation, about a mile up the bay on the east coast of Madau Island. The island merely a sand spit about a hundred yards wide at this point, planted with coconuts. Trees bear well, though neglected, but the copra being turned out is very poor and was rejected, for sorting, by Don. Left Okwasas at 10 o'clock and anchored off Munieveho resthouse and canoe landing about 1 o'clock. Several canoes at the landing, which is a coral knoll some 10 ft. high, connected with the land by a good causeway of mangrove sticks and duckwalk of old canoe outriggers etc. Two hamlets - the larger, of about 6 houses, called Muniveo, the smaller - about a third of a mile inland on goodlooking ~~red~~ red soil derived from coral. Some old gardens clearing and two producing gardens, unit mainly tall forest which is perhaps primary. Ground elevated not more than 20-30 feet. The people have a plantation on the west coast of the island. They are producing some copra, also fishing for trochus shell. Only one old woman in the hamlets when we ~~came~~ arrived. Many old orange trees with a fair crop of unripe fruit. Some bush lemon trees, one tangerine, and several soursops, a so-called "cherry" tree (??), etc.

Left Munivea about 2 pm and anchored in Kwaiapan Bay at six. EE wind much moderated.

Rus' boys swatted 36 Ascelliscus with switches last night. We are so very short of batteries that very little jacking can be done for the rest of our stay on the island.

Saturday Nov. 17 - Sunday 18th Fine rainless 48 hours. Fairly southeaster still blowing on Saturday; Sunday was calm.

Lionel and I on excursion to Luluai with Don Neate. Left Kulumadau Creek in the very small launch "Bagau" (devil) at 1:20, with a punt in tow to carry the boys and gear. Passed through Kwaiapan Bay, across Monai Bay, through the very narrow Kwagai Passage, and arrived at Kwagai village at 4:10. We were kept back by the southeaster. Left the boats at Kwagai, where Don had boys waiting, and walked overland to Luluai. Good track opened up about two months ago by Don for communication with a copper prospecting show which his father has at Luluai (a second, perhaps better, show a mile or two further down the coast at ). The country steep, and towards Luluai very rocky. Climbed to about 400 feet in the usual up and down progression of New Guinea; steps of round timber, and even hand rails in the worst places, made the going easy. The usual procedure is to send baggage by canor or flattie, but the sea too rough for this and our beds and food had to be carried.

Luluai (probably the type locality for the "lullulae" species and subspecies of mammals collected years ago by Meek) is the name of a former village now applied to Neate's mine and camp in a little bay, screened by reef, between two rock, gored headlands. A very comfortable low shack of galvanized iron and palm leaf stands under the shade of a great, sprawling loolooila (Calophyllum inophyllum) tree on the very edge of the white sandy beach and not a foot above high water mark. A typical hut of the Australian bush. One could almost imagine the smell of cooking corned beef in it. There is a thatched tool house and two thatched houses for the three boys presently working at the mine (Kropan villagers who have their families with them). A small creek dammed by sand washed up during the southeast season, enters the little bay, between the houses, Almost immediately behind, the mountains rise very steeply. Several acres of the face of the range, up to about 200 feet, have been cleared to expose the workings, and planted recently with sweet potatoes. About 100 feet up the slopes is the entrance to a collapsed drive; Above that about another hundred feet is a 28-ft. shaft which cuts the load on the underlie. ~~Assessment~~ ~~shipment of two 5-ton parcels of ore assayed 10%~~ lode about 5 feet thick. A recent shipment of two 5-ton parcels of ore assayed 10%. This not payable. Neate apparently intends to develop the show in the hope of better values. It was opened up many years ago who blew himself to pieces while dynamiting fish.

In the forest on the creek at about 400-500 feet, was a drive about 100 ft. deep in which Lionel and the boys swatted ~~xxxx~~ four very big-ared Hipposideros now to the collection (He had jacked a Pteropus hypomelanus the night before near camp, and downed an Emballoneura).



from which an application of oil will repel it soon, and upon my return to the boat. One of the boys showed a beautiful greenish brown system which was called "Nicker Pigeon".

We anchored off Nahan Creek about 5:45 AM and left about 10. Onward native plantation about a mile up the bay on the east coast of Nahan Island. The island merely a sand spit about a hundred yards wide at this point, planted with coconuts. Trees were well, though neglected, but the coconuts being turned out a very poor and was rejected for selling by them. Left Nahan at 10 o'clock and anchored off Nahan Creek about 10:15. High noon. Several canoes at the landing, which is a small inlet some 10 ft. high, connected with the land by a good causeway of mangrove roots and branches of old canoes and logs etc. Two canoes - the larger, of about 60 tons, called "Nahan", the smaller about a third of a mile inland on goodlooking reef and half a mile from shore. Some of the garden planting and two or three small houses, with many tall forest trees in the background. Ground elevated not more than 20-30 feet. The people have a plantation on the west coast of the island. They are growing some copra, also, flax for twine and cloth. Only one old woman in the house when we arrived. Many old orange trees with a large crop of orange fruit. Some small banana trees, one jackfruit, and several papayas, a so-called "Nicker" tree (??), etc.

Left Nahan about 2 PM and anchored in Nahan Bay at six. It was then moderate. The boys swarmed to the shore with bottles. We are so very short of batteries that very little junking can be done for the rest of our stay on the island.

Saturday Nov. 19 - Sunday 18th. Fine rainless day. Fairly southerly wind blowing on Saturday; Sunday was calm.

Island and I on excursion to Nahan with Don West. Left Nahan Creek in the very small launch "Bany" (40 ft) at 1:40. With a party in the boat and two. Passed through Nahan Bay, across Nahan Bay, across Nahan Bay, across Nahan Bay, and arrived at Nahan village at 4:10. We were kept back by the southerly wind. Left the boat at Nahan, where Don had been waiting, and walked overland to Nahan. Good track opened up about two months ago by Don for communication with a copra processing station which his father has at Nahan (a second, perhaps better, than a mile or two further down the coast at Nahan). The country is very low, and the track is very good. Climbed to about 400 feet in the north, up a steep slope of low bushes, dense of ferns, and even had a little in the worst places, but the going was easy. The same procedure as to send baggage to camp or Nahan, but we saw too much for that, and our bags and food had to be carried. Indeed (probably the type of the "Nahan" species and suspected of Nahan). Collected here ago to Nahan. In the name of a former village now applied to Nahan's mine. A very low camp in a little bay, screened by reef, between two small, forested hills. A very comfortable low camp of palm and iron and palm leaf stands under the shade of a great spreading tree (Garcinia and others). There on the very edge of the water many dead and rot above high water mark. A typical hut of the Nahan type. One could almost imagine the shell of cooking covered with it. There is a flattened rock house and two thatched houses for the three boys, recently working at the mine (Nahan village) who have their families with them. A small creek flowed by and washed to the south-east again, enters the little bay, between the houses. Almost immediately the mountains rise very steeply. Several acres of the rice of the range, up to about 800 feet, have been cleared to expose the workings, and planted recently with rice. About 100 feet up the slope is the entrance to a collapsed mine. Above that is another mine, which once was the main one on the island. A recent shipment of two tons of ore arrived here. This was ore, Nahan apparently intends to develop the show in the hope of better times. It was opened up many years ago, but it fell to pieces while dismantling.

In the forest on the creek at about 400-500 feet, was a drive about 100 ft. deep in which I found the boys swarmed with very big-eyed Hylas, now to be collected. It had a large Nahan house the night before last, and down on



Following the creek we reached the broad top of the range at 880 feet, according to the o-mile military map. The forest rather mossy there on the ground and the buttressed bases of the larger trees. The forest to a large extent dominated by a great Syncarpia with reddish-brown bole up to 1.5 m thick. A splendid tree, very conspicuous in the forest, and a very good botanical find. So far as I know there are only two known species, both natives of eastern Australia). A Podocarpus (aff. neriifolius) a common tree attaining lesser canopy size. The Syncarpia is called . . . . Botanized along the top of the range as it fell towards Kwagai, collecting mainly ferns. The forest absolutely virgin, and a pleasure to walk in after the much disturbed growths of Kulumadau. Mostly very open on the ground. Gray moss cushions (Leucobryum?) very abundant on the ground on the more open parts of the ridge crest. A filmy fern, growing in moss on the buttressed bases of the larger trees, was shrivelled by the dry weather. The Syncarpia trees were often obviously hollow, and two small ones that I had cut down were rotten inside and had only a shell of hard, brown wood. Pig rootings common on the ridgecrest. Lionel put a No. 2 charge into the side of one sow, which made off ahead a a hue and cry - a native from Luluai having just arrived with his dog and an iron spear.

Lunched in the forest not far from Kwagai, which we reached about 2 o'clock. There with his numerous family in a tarred, dilapidated flattie motor, was halfcaste George Watkins, brother-in-law of Arthur Dawkins. A pleasant fellow, big and strongly built, and apparently a bit naive. Runs the Dawkins plantation and dabbles in this and that on the side. Said to be heavily in debt, and supporting, besides three or four children of his own, the four kids of a dead brother. Another brother, Billy, lives alone in the bush to the south of Monai Bay. Said not to have had a haircut or beard trim for years. Seldom has contact with other humans; lives on the products of a garden, and flour, etc., carried to him by George. George was on a visit to him today.

Leaving Kwagai soon after 2 o'clock, we botanized about the entrance to Kwagai Passage, on the Monai ~~side~~ Bat side, working the limestone which rises in cliffs from the sea. A Fagraea very abundant here, scenting the air with its big white flowers. The limestone has been described by Stanley as probably Tertiary. It is very different from the Pleistocene corals of the west end of the island. Sheer walls in places; in other places eroded into pinnacles of very jagged form. There is a little soak of cool fresh water in the limestone at the east side of the entrance to the passage which the local natives call "Mr. Gill."

With a light southeast breeze behind us, we had a good run and arrived at the tie-up place on Kulumadau Creek at 5:45. On the way up to the cyanide plant Lionel shot a slow-flying Miniopterus.

Upon return to camp we found that Rus had this evening shot a second Emballoneura with curiousky protruding lips, new to the collection and the 19th species for the Woodlark collection. This makes Woodlark the best island so far for mammal forms. Top before was Fergusson, with 18 species.

Monday Nov. 19: Fine sunny day except for a useful shower about 1:30 pm, which put some water into our almost empty tank. The boys, for the first time, had been carrying water today.

Stayed in camp to work on the 42 numbers collected on the inland excursion. The best lot of plants I have gathered on the island. They/ boys in the afternoon collected a few numbers down towards the landing.

Lionel, guided by the Kropan councillor, examined two caves in the vicinity of the site of the original government station at Bonigai, about  $1\frac{1}{2}$  miles to the SW of Kulumadau. One of the caves contained several human skulls in good condition, complete with lower mandibles, but neither held any bats. Some distance inside the skull cave, a pool of water blocked further progress. The caves of the island have been singularly in bats. On the excursion Lionel shot a Nyctimene, the second for the island.

A rat or two in traps. An Ascelliscus shot by Rus.







Tuesday Nov. 20: A dry, hot day, and again the water tank is almost empty. A slight breeze from about west. This is an unusually dry spell for Kulumadau. This afternoon, about three ~~xx~~ o'clock, temperature was 88 F at my work table.

Botanized about two miles along the Bonivat Road for very little (about 10 numbers including a couple of mosses). Most interesting plants were two very bulky Araliaceae, one of which I think is Pelendra. Both have big rayed leaves (one palmate, one palmatisect).

Three Rattus in traps. Nothing shot last night. Two boys were out for four hours or more, hunting for cuscus, but did not see a thing.

Lionel checked stires and made up lists for the supply of the Trobriands camp. A radiogram from Buntings advuses that the Kedeluma is due to arrive here at 5 pm Thursday.

Wed. Nov. 21: Another hot, rainless day with moderate SE winds.

Went to Boiboi in Neate's smaller launch to examine the forest for ebony. Rus went with me. Found five big trees 15-22 inches in diameter (said to be about 40 in the area) but all were sterile. There is confusion about ebony, at least in the minds of two of Neate's boys who were with me. The true ebony has a roughish bark and white sapwood of rather heavy weight. Another tree, pointed out to me as GAI or ebony had similar leaves, bit lightweight wood and reddish sap, and was a nutmeg. The true ebony might be another nutmeg. Sterile specimens I have from Luluai should be adequate for identification tp family. (It might be Theaceae. The leaf does not look like Ebenaceae).

Boiboi is on the west side of the outer harbor. It used to be the deep water port for Kulumadau. There was formerly a slipway for small ships there.

Four synconycteris in the bat nets. Nothing in traps. No shooting.

Closed down the botanical department for Woodlark. Have collected 243 numbers including 19 bryophytes, 1345 herbarium sheets of specimens. This is our poorest island for plants. It is worse than Rowsel, which at least had mountains to bring in elements other lowland. The woodland forests actually are poor in species of all categories. There is probably quite a lot of endemism. Many of the plants occur also in the Louisiades but not on the other islands we have visited. There is a complement of common species right through the islands from the d'Entrecasteaux to the Louisiades and Woodlark, some of them being familiar also from the mainland.

Thursday Nov. 22: Mixed weather. Hazy early morning followed by a very heavy SW rain squall about 9am. Scattered distant showers and thick haze.

Am closing these notes at 3 pm. The "Kedeluma", due at 5 O'clock, is not in sight, as it it should be if it is to arrive on time and allow us to load this evening.

Mammals for the island total 19 species, 181 specimens of which 105 are skins and skulls. Frogs number 44, snakes 21. lizards 29, crayfish 8. Day flying insects have turned out well. At first, night catching was good, but with onset of the recent dry weather proceeds from the light fell to practically nil.

In haste Len

Friday Nov. 23 -- Monday Nov. 26: Voyage Woodlark to Samarai

The "Kedeluma" attived at 1:15 pm on the 2rrd, a day overdue. Reasons the native Skipper, Iam, had hus young wife on board, and dawdled on the way.

At 5:45 am on the 24th we left Kulumadau and at 2:03 we anchored in the lee of the



Tuesday Nov. 30: A dry, not very hot day, and again the water tank is almost empty. A slight breeze from about west. There is an unusually dry smell for Kalmuk. This afternoon, about three at 5:00, temperature was 85 F at my work table.

Found red about two miles along the railway road for very little (about 10 mm- bars including a couple of moose). Most interesting plants were two very small trees, one of which I think is *Palafoxia*. Both have big red leaves (one palmate, one palmately).

Three rats in traps, nothing shot last night. Two dogs were out for four hours on more, hunting for mouse, but did not see a thing.

Blomel checked rifles and made up lists for the supply of the Trobriand camp. A radiogram from Honolulu advises that the Kalmuk is due to arrive here at 5 pm tomorrow.

Wed. Nov. 31. Another hot, rainless day with moderate SE winds.

Went to Holok in West's smaller launch to examine the forest for ebony. The water with me. Found five big trees 15-25 inches in diameter (said to be about 50 in the area) and all were sterile. There is a companion about ebony, at least in the kind of two of West's boys who were with me. The tree ebony has a tough bark and white wood of rather heavy weight. Another tree, pointed out to me as *ebony* and similar leaves, but light wood and reddish sap, and was a nutmeg. The tree ebony might be another nutmeg. Another specimen I have from Holok should be adequate for identification. (It might be *Thespesia*. The leaf does not look like *Thespesia*).

Holok is on the west side of the outer harbor. It used to be the deep water port for Kalmuk. There was formerly a railway for small ships there.

Four *Eragrostis* in the past here. Nothing in traps. No shooting.

Classed down the botanical department for Holok. Have collected 243 specimens including 19 *Procytes*, 19 *Thespesia* sheets of specimens. This is our poorest island for plants. It is worse than *Lowell*, which at least had mountains to bring in elements other islands. The woodlands forests actually are poor in species of all categories. There is probably quite a lot of endemism. Many of the plants occur also in the lowland area but not on the other islands we have visited. There is a complement of common species right through the islands from the *Thespesia* to the *Thespesia* and *Thespesia* some of them being familiar also from the mainland.

Thursday Nov. 2nd. Mixed weather. Heavy early morning rain followed by a very heavy SE rain squall about 9 am. Scattered distant showers and thick haze.

An evening breeze at 5 pm. The "Kalmuk", due at 5:00, is not in sight. It should be in to arrive on time and allow us to load this evening.

Mammals for the island total 19 species, 181 specimens of which 105 are birds and 84 are mammals. From number 44, makes 11. Includes 25, crayfish 8. Day flying insects have turned out well. At first night watching was good, but with onset of the recent dry weather proceeds from the light fell to practically nil.

Friday Nov. 23. -- Monday Nov. 24. Voyage Woodlark to Samarai

The "Kalmuk" arrived at 11:15 pm on the 23rd, a very overcast. Reasons for the delay, I am, had my young wife on board, and dived on the way.

At 5:45 am on the 24th we left Kalmuk and at 8:00 we anchored in the bay of the



westernmost island of the Egum Group. A poor anchorage on coral; we had out  $1\frac{1}{2}$  shackles of chain. A light northeaster blowing. Good passage. All hands ashore to stretch legs, drink coconut milk, and shoot pigeons for supper. The island only a few acres in extent. Rough, eroded coral, elevated less than 10 feet, and forested with a patch of coconuts, and a sandy little beach at the northwest end. Pigeons, towards evening, came off in fair numbers from Yanaba, largest island of this ~~shell group~~ shell group, and of slightly coral, ~~too~~ too. The beautiful little white fairy tern there in plenty, also a dark brown tern with white crown, which had laid a few eggs on a bed of pig-face wood half wet by spray.

Left the Egums at 4:15 am on the 25th and had a good run across to Saintaitai, on Normanby Island, where we tied up to the small wharf at 2:20 pm. Decided to call in there at the expense of an extra day's charter, to try at night got the wallaby which inhabits grasslands a mile or two to the south of the plantation. I spent the evening with Bill Gray, the manager and sole white man there, while Rus and Lionel and two boys hunted about sundown and then jacked unsuccessfully for the wallaby. Lionel saw one, which he describes as small and dark, and probably a form of the sand wallaby (*Protemnodon agilis*). Sawaitaitai has 700 bearing acres. Gray has been there less than a year (since March). A man of 56 with one leg crippled by a Japanese bullet in the last war. Still mourning his second wife, who died early in 1955; his first wife cleared out with an American soldier,

Left Sawaitaitai at 3:05 am on the 26th and reached Samarai, via the south end of Normanby, at 2:20 PM. Light SE still blowing; good passage. We hoped to unload immediately after arrival, but there was no wharf space. The 10,000 ton Maybank loading copra and a number of small ships in port, I am staying with Dusty Miller; Rus is at the guesthouse.

Tuesday Nov. 27: After the cargo was unloaded and sorted, I went to the District Office to inquire about Milne Bay and other near parts of the mainland coast. Could get very little information there. This, however, was available from E.C. ("Speed") Graham, officer in charge of native cooperatives. There are good conditions and rest-houses at Ramaga and Dawa dawa in Milne Bay. I have decided to work at the latter place until Christmas.

Lionel put in an order for stores for himself and Rus and six boys at the Trobriands.

Samarai hot and dry; very little rain lately, as on Normanby and Woodlark. The Lae coast is reported to be having the driest season on record.

There is activity here in shipping scrap steel, ~~as on Normanby and Woodlark~~ to Japan from the old military installations in Milne Bay. The Japs are paying 24 pounds a ton delivered on the wharf at Samarai.

Arrived by the Qantas plane from Australia this morning Reg (R.G.) and Mrs. Neate of Woodlark. Accompanying them is a consulting engineer fresh from Japan by air to inspect and report on Neate's iron and copper shows. The man is in the employ of the Mitsubishi interests in Australia who has been with this company for 27 years.

There is a report in circulation (Dusty Miller has it from District Commissioner Timperley) that that Cuthbert's old mine on Misima is to be reopened.

Wed. Nov. 28: Hot dry day but with a light SE breeze. Sky hazy. This is late in the year for this kind of weather in Samarai.

Finished my packing and am about ready to depart for Milne Cay. A boat leaves for there at noon tomorrow. Would prefer if possible to go a day later, for due to arrive in Samarai from Rabaul tomorrow is Dr. Bill Smythe who is going to Mapamoiwa on Fergusson Island to continue his anthropological studies.







No boat available for the Trobriands until the beginning of next week. Rus and Lionel, therefore, will go across to the mainland and base with Lionel's grandmother for a few day's collecting.

This morning I made application for air bookings to take Rus home via the Pacific. Proposed date of departure from Samarai December 28, for arrival in New York about January 4th.

NO ENTRY NOV. 29, NOV. 30, DEC. 1



MADE IN U.S.A.



Sunday Dec. 2: Left Samarai on "Kedeluma" at 9:30 am and arrived Dawa Dawa about 1 o'clock. My first visit to Milne Bay. Had on board, going to pick up school children who had come in by Corsair for Christmas holidays, Ray Taylor, his half-caste wife (Lucy English) young Gordon English.

Peter Sheeky's advance letter notwithstanding, there was no red carpet out for meat Dawa Dawa. The big house turned out to be the property of the village councillor, named ADELEI. Place about 30 by 20 feet the frame largely of Douglas fir and Australian hardwood, the roof of galvanized iron. Adelei refused to vacate his house, saying he had no other. But the house has two rooms at each end separated by a wide breezeway and I have rented two-thirds of it for 30/ a week. A high price, but worth it to me. The only alternative was to go cruising around the bay in search of another locality.

Situated on a narrow gravel spit on the east side of the mouth of the Dawa Dawa River (a 200-yard stream) The village is a mere hamlet of five houses. The gray gravel has been taken to Samarai in quantity for making concrete. On west side of the river is small coconut plantation owned by

Was met by a young local Govt. Councillor ( ), who had been sent by MAHURU MARK. MH himself turned up in about an hour. Imposing middle-aged man in singlet, shorts and sandshoes, affecting a close-cropped moustache and a carved ebony walking stick.

Monday Dec. 3: SE weather with about an hour of heavy rain in the middle of the afternoon. This is the dry season in the bay and little rain has fallen in some weeks.

Finished camp rigging in AM and after lunch went about two miles up the river in a dinghy loaned me by Buntings (dunghy of fibre-glass). Botanical results were disappointing, though the excursion was spoiled by the rain. The hills or mountains rise steeply from the river for the most part and the covering of the lower parts slopes is practically all second growth rain forest and gardens planted chiefly to taro. Taro and sweet potatoes are the staples here. Some smooth sago seen. Mahuru Mark visited me again today. Says much sago is made higher up the river in time of scarcity in the gardens. He also informs me that the logs for Ezod's former sawmill were cut high up the river (15 miles though my prior information was 5 or 6 miles).

A long string of small rafts of sago, and ~~rough logs~~ single logs is tied up in the mouth of the river. Said to be owned by the Catholic Mission at SEDEIA and to have been there a long time.

Am paying a penalty for not checking to the last detail a job done by natives. The typewriter was left behind when my cargo was unloaded from the KEDELUMA for packing.

Tuesday Dec. 4: Strong SE wind producing a small surf on the steep weather side of the gravel spit. No rain or threat of rain.

Botanized a mile or two east along the coast. with the mountain up a small running creek. Practically a blank for plants. A disappointing morning. I expected to get at least a good assortment of second growth species. Was in primary forest up the stream. Even when heavily shaded rocks of waterfalls were practically bare of the ferns which I expected to find. Very steep valley slopes.

Saw where fair-sized logs had been cut on steep slopes. and brought down to the coast. Some natives now working at this in the area I visited this morning.

Wed. Dec. 5: Weather more s to SW. Heavy showers from 3 to 10 pm.

From 7 to 4:30 on an excursion up the river by dinghy. Went as far as the dinghy could be taken, a distance of 5-6 miles, by the windings of the river, pulling the boat up rapids and rowing on deep water. All this for a miserable total of nine plant numbers.



up. A large string of small white of eggs of large, and unknown single eggs is found in the mouth of the river. Said to be owned by the Catholic Mission and to have been there a long time.

Strongly indicating a small run on the steep western side of the  
grove. The rain or current of rain.

The time which I expected to find. Very steep wall slopes. Up the stream. Doves when heavily shaded rocks of waterfalls were particularly dense of needed to get at least a good amount of second growth species. I ex- well running stream. Practically a blank landscape. A disconcerting morning. I ex- belated a mile or two east along the coast. With the morning of 1

[illegible]

From 7 to 4:30 on an excursion up the river. I went as far as the bridge could be taken, a distance of 250 miles, by the bridge of the river. During the past 24 hours had rained on deep water. All the water of this river was



Passed one ~~stand~~ at the fourth bend. Just above very farthest point was a big gravelly island with a patch of small trees growing on it. Below the island a big sluggish tributary came in on the left. Saw five hamlets, all on the right bank and four of them below the fourth bend. One hour visited in the forest of the left just above very far point. All along the river most of the slopes & all the little flats had been cultivated. Very little primary forest except on the very steep slopes and the crest of the higher hills. At my far point I was behind the coastal, which runs to 3000 feet. The one hill visible upstream was only 400-500 ft. high.

The river is tidal past the fourth bend a distance of about 2 miles but the water is quite fresh below that point.. At the mouth it is only half salty.

For some distance above the fourth bend some millions of small speckled fish about 12 in. long, were moving upstream. I take it to be the annual visitation of whitebait. They were too fast for me when I tried to catch some in a butterfly net but the boys caught a pound or so in an old basket they found on the river bank.

Up river was as poor for insects as for plants. Saw very few butterflies only two species of dragonflies. Caught only one dragonfly, a fine big Gomphid, and one damselfly.

The village is infested with mangy, underdeveloped weak mongrel dogs, They snap and snarl at all hours of day and night. Last night the cook havinn greased my two pairs of boots left them in the detached kitchen. It was a thoughtless thing to do. This morning I was shown the result. Lower end of laces eaten off. Tops of the full waterproofing inserts chewed away. I'm lucky the damage was no worse.

Near my far point up the river today on the right bank some Dawa Dawa men were clearing some forest for the planting of some experimental coff trees. Councillor ADELEI was there. They call coffee "Cof".

Thursday Dec. 6: Weather continues to be about SW. Rainless 24 hours but for slight shower about 1 pm.

My missing typewriter and some mail brought from Samarai today by Maluru Mark of Gwaiwili.

A letter dated yesterday, from Rus, says they have been delayed by the non-appearance of Lumley's boat and will be sailing on the "Chinampa" at twelve tonight. In four days on the mainland they had the remarkably good haul of 13 ~~specimens~~ species, 59 individuals (Dactylonax, Pseudocheirus, Nyctimene albiventer, Rousettus, a very bit Pteropus, Uromys, Pogonomys, Syconycterus, Pipistrellus, Phalanger orientalis, Malomys, Petaurus, large Trapping must have been very poor, if traps were set (only the Melomys is likely to have been trapped.)

I have spent the day in camp. Have decided to vacate this camp at the first opportunity, and today I expected a boat to go by en route to the head of the bay to pick up Corsair passengers, etc., due early tomorrow. Perhaps the flight has been delayed. This morning I called my boys into council in the hope that from one of them I could get information on a locality with "good bush" suitable for botanizing. No information was forthcoming. I lean towards the south coast (Susu), not far from Samarai. A large area there, between Fyfe Bay and Samarai (and Milne Bay for that matter) has not been touched for plants except for a few numbers collected in the 1870's by the missionary James Chalmers.

Friday Dec. 7: Sultry day of high thin overcast. No wind at all. Not a glimpse of the sun.

Was packed up before nine and waited all day for a boat to turn up, going in the direction of Samarai. None came. Did not hear the sound of the plane at the head of the Bay, so conclude it did not arrive from Port Moresby. The tender "Kitava" passed at daybreak, going







going from Samarai to the head of the Bay to meet the plane (Corsair comes every Friday) or is supposed to. A Government trawler went by in the same direction about an hour later. From Maluru Mark, who visited me in the afternoon, I learned that some official from Port Moresby was due to arrive ~~in the afternoon~~ on the plane to join Sheeky in choosing a site for a new government station in the bay. That would explain the presence of the trawler. These eternal delays have lost us a lot of time on this expedition. I am hoping that Kitawa or the trawler, on their return to Samarai, will come close enough to Dawa Dawa to be signalled. If this does not happen, I can get to Samarai, after some more delay, perhaps, on a small native-owned launch called "Wowoli", the property of MagaMagavillage. Asked Mahuru Mark to arrange for this.

M.H. is a most intelligent native to whom one can talk in straight English. Formerly he was a captain of small ships owned by Kwato Mission and perhaps business firms of Samarai. He has been as far as Cairns, by air. Still it is hard for me to sustain a conversation with him. There is such a vast difference in background and interests to be bridged. He tells me that the Milne Bay Local Government Council area takes a strip through the Sagarai Valley to Mullina Harbor on the south coast. Much coffee is produced by natives in the valley. The Council builds public facilities such as wharves (a road from the head of the bay at Gibara (old goldfield) in to the Sagarai Valley is planned, to bring out the coffee), employs and pays the village policeman, has one small school, builds medical aid posts which are staffed by big government. To meet costs a tax of 3/10/- a year is levied on adult males, 30/- on adolescent boys, 20/- on women. A rise in basic rate to four pounds is under consideration.

The above notes were barely finished when there was a call of "sail-ho" and a white-painted vessel was in sight, coming from the direction of Samarai. This turned out to be the "Kedeluma", picking up copra at Bunting's plantation in the bay. Dusty had sent out to me an icebox with some fresh steak and sausages and a bottle of cold beer. At 7:15 my cargo was on board and we left for Samarai. Arrived 10:05 pm and slept on the vessel at the wharf. Boys talked loudly until half an hour after midnight; a baby on a neighboring boring boat began to cry before daylight.

Saturday Dec. 8: Very hot day. No rain in Samarai since I left for Milne Bay a week ago. Manu houses are out of the rain water which they catch from their roofs as regular supply. Water is being carried from two shallow town wells.

After unloading my cargo and moving my personal gear to Dusty's house, I went along to the government offices to get information on the hearer south coast. No one in administration knew anything, except for a native policeman, who had been on a patrol there recently. Was referred to Cottrell-Dormer, chief agricultural officer, who has made inspection visits connected with the experimental planting of coffee by the native people. He recommended Dagegadoga, in Suchia Bay, where there is good primary forest at some little distance inland, and as an alternative Dalina, about 10 miles further on.

Sunday Dec. 9: In Samarai. A few points of rain from a thundershower last night.

A complete day of rest for me. My first for a long time.

Monday Dec. 10: Left Samarai at 9:15 am on Ernie Evennett's 26 ft. launch "Sirius". Ernie's initials are E.W.). Called in at Rogeia (Rogea) Island with a letter from Cottrell-Dormer to the leader of the community, a big fat man named Maraima. The Bogeia people have gardens and coffee plantations at Suahai Bay, and according to Donner a good house in at their coffee plantings, beside or in the primary forest. Found Manaima supervising, from the shade, preparations for a big Christmas do which is to be put on the beginning of next week. A shelter shed had been built, with temporary galvanized iron roof, and long rough seats, ~~in the shade~~ very high above the ground, in native fashion, put in it. About 100 school children, in two squads of four ranks, were marching back and forth, and singing, in a big grassy playing field. Some women in grass skirts were digging away the side of a hill for filling material which was being run on a tramline to a hollow which was being filled to enlarge the playing field. Maraima



going from Samarai to the head of the bay to meet the plane (Gorham) once every Friday) or as supposed to. A government trawler went in the same direction about an hour later. From Malina Mark, who visited me in the afternoon, I learned that some official from Port Moresby was due to arrive tomorrow on the plane to join the new government station in the bay. That would explain the delay of the trawler. These eternal delays have lost us a lot of time on this expedition. I am hoping that delays on the trawler, on their return to Samarai, will come close enough to save time to be cancelled. It this does not happen, I can get to Samarai after some time delay, perhaps, on a small native-owned launch called "Woo-oi", the property of Magistrate Magistrate. I asked Malina Mark to arrange for this.

Malina is a man, a native, who is now one of the few in Samarai. He has been a captain of small ships owned by Kwato Mission and others business firms of Samarai. He has been as far as Omeke, by air. There is such a vast difference in background and interests to a conversation with him. He tells me that the Malina Bay Local Government Council, which is a body through the Malina Bay, on the southern coast. The Council has public facilities such as a school, a road from the head of the bay to Omeke (old Malina Bay), and a village policeman, who is a native. He also has a medical aid post which is staffed by his government. He has a tax of 2/6 a year levied on adult males, 3/6 on adolescent boys, 1/6 on women. A rise in basic rate to four pounds is under consideration.

The above notes were barely finished when there was a call of "all-ho", and a white painted vessel was in sight, coming from the direction of Samarai. This turned out to be the "Keduma", picking up cargo at Kuning's plantation in the bay. Duty and sent out to me an icebox with some fresh steak and sausages and a bottle of cold beer. At 7.15 my cargo was on board and we left for Samarai. Arrived 10:05 pm and alight on the vessel at the wharf. Boys talked loudly until half an hour after midnight, a half of a help-  
tannak bearing boat began to go before daylight.

Saturday Dec. 8: Very hot day. No rain in Samarai. Since I left for Malina Bay, I have seen no rain. Many houses are out of the rain water which they catch from the roof as regular supply. Water is being carried from two shallow ponds.

After unloading my cargo and moving my personal gear to Dudy's house, I went along to the government offices to get information on the harbor south coast. No one in administration knew anything, except for a native policeman, who had been on a patrol there recently. Was referred to Gottrell-Dorner, chief agricultural officer, who has made inspection visits connected with the experimental planting of coffee by the native people. He recommended Pehedaga, in in Guala Bay, where there is good primary forest at some 1000 distance inland, and as an alternative Deline, about 10 miles further on.

Sunday Dec. 9: In Samarai. A few points of rain from a thunderstorm last night. A complete day of rest for me. My first for a long time.

Monday Dec. 10: Left Samarai at 9:15 pm on Etna Evershed's 20 ft. launch "Sittina". Etna's initials are E.W. Called in at Bogota (Bogota) Island, a latter from Gottrell-Dorner to the leader of the community, a big fat man named Marama. The Bogota people have gardens and coffee plantations at Guala Bay, and according to Marama a good house in at their coffee plantings, beside or in the primary forest. Found Marama supervising, from the shade, preparation for a big Christmas which is to be put on the beginning of next week. A shelter shed had been built, with temporary gables raised from roof, and long rough seats, ~~in two~~ very high above the ground, in native fashion, put in it. About 100 school children, in two grades of four ranks, were watching back and forth, and singing, in a big grassy playing field. Some women in grass skirts were digging away the side of a hill for filling material which was being used in a machine to a hollow which was being filled to enlarge the playing field. Marama



Maraima detailed one of his committee, an elderly, mustached man named Nasona, to accompany me as a guide.

At about 10:30 we landed at the abandoned coconut plantation of Mañadona in Sunhia Bay (the whole locality seems to be called Gadagadoga), and, walking inland for 20 minutes came to the remains of the establishment to which Cecil Abel is said to have referred re-treated after the Japanese invasion with all the females of Kwato Mission. (The story in circulation is that he ran it as a brothel for American soldiers). At any rate a small; galvanised hut, in ruinous condition, remained in a sea of prickly spear grass (Chrysopogon acicularis). That, according to Mazona was the only building anywhere near the primary forest. The Rogea people when working their food gardens and coffee, live in houses on the beach and walk inland. Saw no primary forest and conditions were very dry. Signs of a few cattle running wild.

After lunch of fried ~~king~~ kingfish, caught on a towline, we left Cadagadoga at 12:15. Went past Guaugurina Bay, the low mountain shores of which carry what appears to be primary forest and no native population, to the next bay. Good looking forest at the head of this bay, near Biabia village, but the rest house is at Delina on a narrow, dry point of land two or three miles from the good forest. Rest house well habitable, but the drought has made the village short of water, which has to be carried from a creek towards the head of the bay, at least a mile away.

Left Dolina at 5:05, proceeded west along what is known as the Susu Coast, and anchored off Modewa village, in Modewa Bay, at 4:30 PM. Big village with many coconuts on a curving steep beach of dark sand which would be hard to land on in the southeast season. Low mountains, covered for the most part perhaps 1000-1400 feet close to the shore. Conditions are droughty, but the locality is the most promising I have seen on this coast and I will see what it carries for me.

It is said that many people from the Milne Bay area were evacuated to Modewa during the military occupation of World War II. A Chinese-native half-caste named Aubrey Ah Chee is reported to have a trading station three or four miles west along the coast towards Susu Island. Ah Chee has a boat which could take me back to Samarai if December 25, the date I have arranged for the "Sirius" to come back for me, should prove too late. Modewa is in LMS mission territory; a native teacher is stationed there.

Tuesday Dec. 11: Heat of a dry day somewhat modified by a strong southeast wind. Some cloud but no promise of rain. We would have found it hard to land on this beach with a wind yesterday like there was today.

Boys building tables and other way making camp. Inspected the village in the morning and in the afternoon walked west to the mouth of the river, about 3/4 to 1 mile. Wygg village, according to a rather flash individual who attached himself to me, has a population of 160 people. Houses in a single widely spaced line on each side of ~~the~~ a wide walk running parallel with the beach and probably half a mile in length. Houses thatched with sago leaf and walled with sago leaf sheaths for the best part. The walk edged on both sides with crotons, Hibiscus, and bulbous plants (Grinum, Hymenocallis). A new LMS mission church of concrete, fibrocement, and galvanized iron roof, is as yet unopened. The old church was burnt down. Services and school are being held in the shade of a tree. Nothing outstanding in most of the rather few people I saw. A good deal of sippoma skin disease. Canoes seen are of the outrigger type. An old whaleboat being rebuilt under a leaf shed (for launching in "1957"). One thatched house had a glazed, unmovable window at one end and the regular shutters elsewhere.

Ernie left for Samarai at 5:30 am. He wanted good light to see his way through the reefs of the entrance to the bay.

Wed. December 12: Southeast wind somewhat moderated from yesterday, but still too strong  
does rain on this coast. Some thunder in afternoon in the direction of the Cloudy Mts., to the NW.







With a half bald councillor named Raiga (one of the four village councillors as ?odem) as guide, I spent five hours in the field in an approximate direction towards the Gara River. My guide was supposed to take to the river, but collecting delayed us, and apparently we were still some distance from the big stream when the time came to turn back. The small path that we followed went inland from the beach about a  $\frac{1}{4}$  mile from the mouth of the river, first through grass and coconuts, then a strip of dry sago swamp. After that came what appeared to be an old beach line, then more sago, and finally to slightly ridgy ground, covered with tall primary forest, on which we skirted the hills that rise to the east of the river and behind Modena. Crossed in the forest two or three small streams on which Sago grew. Away from the sago, the ground was very dry. The undergrowth of the forest was wilted and drooping; most epiphytes, which are mainly ferns were shrivelled and dry. An unusually dry condition for rain forest developed under a rainfall of probably somewhere about 100 inches a year. The dark sandy soil of the old beach line between the strips of sago swamp, 100 yards or so in width, was largely under native gardens newly planted to taro, yams and casava, and bananas. The ground in the gardens was dry and dusty. A small experimental plot of coffee seen, apparently about a year old. Much sago had been made in the little swamps during the past few months. (the palms are all of the smooth sort) and grow to a good large size here. The only gardens seen were on the old beach line, but formerly there had been cultivation ~~to~~ on the foothills. I judge that the people of the village at this time are living mainly on sago and store foods. No pig fences round gardens.

Could collect only a dozen species. A poor take for a long morning in new territory, and nothing of special interest.

Insects are turning up fairly well. Last night the boys and I managed to net five big dusk-flying dragonflies. The same species seems to occur on all the islands, but there would seem to be local variations, and the dusk-flyers are always good to have. They are difficult to catch, especially with the inadequate Ward nets with which I am supplied.

The rest house is well built and comfortable. There is a good small barracks for the boys. As always in anything but a new thatched house, pale yellowish ~~XXXXXXXXXXXX~~ ~~thing~~ borer droppings powder every exposed object in the resthouse. xxxxxx

Thursday Dec. 13: SE wind further subsided; did not start to blow until about 11 am. High clouds drifting over from the north. Rain clouds and thunder over the mountains.

Again with Reiga as guide went eastwards in the bay about  $1\frac{1}{2}$  miles or more to Borowaisau village. Crossed a big tidal creek (by canoe) which runs in behind Modewa village, then a little way along the coast to a mangrove stream bringing a trickle of clear fresh water down from the hills. There on flat ground under the steep rise of the hills, a plot of 35 coffee trees had been planted with a tall Orotalaria and some young leguminous trees as shade. Only 11 of the coffee trees, 2-3 feet high survived. A little further on, crossed the rock bed of a dry creek, rises in rocky headlands here, hence the inland position of the road here, which came out of the hills close to Borowaidau village. Several rocky gullies carry a little water in the hills. Having low tide for the return journey, we followed the rocky shore most of the way under the hills.

Collected another dozen numbers, the most interesting being two small feather palms of the primary forest undergrowth, and an oak. The latter grow in mixed rain forest above the coffee garden, its roots not more than about 5 m above sea level. An unusually low altitude for the genus, which really belongs to the mountains.

From our terminal point at Borowaidau, I photographed the Cloudy Mts. rising behind Modewa Bay. Questioning Raiga on the mountains, he told me that, long ago the missionary known to the natives as "Tamate" (Rev. James Chalmers) climbed a fronting peak of the Cloudy Mts. and placed a flag there. The Peak is called Bio, and might be the Mt. Nelson of the 4-mile map Samarai sheet), the height of which is given as 2095 feet, Gugu Sari the main peak of the range is 4450 feet high, and there are peaks of intermediate height







between it and Mt. Nelson on the map. If Bio is Nelson, and it was the only peak that Chalmers climbed (as Baiga asserted), that must have been where his "Cloudy Mountain" plants came from. Mt. Nelson rises directly opposite Susu Island, where Chalmers had his mission station, established in the 1870s. Chalmers was murdered by the Goarabari of the Delta country in, I think, 1906. Natives have a long memory for such things.

Gathered 42 seeds of one of the feather palms (#28882) for the Fairchild Tropical Garden. That makes five species so collected on this trip.

The natives today are catching many sardines, of which there is a school in the bay. For lunch I had a small mackerel-like fish, shorter and deeper than any mackerel I know, and very good too. Here as at Dawa Dawa we are getting all the fresh food we need. Here it is, so far, fish, sweet potatoes and bananas. There can not be any great abundance of food in this area. The village seems too big for the meager gardens I have seen under cultivation, and there has been no rain for  $1\frac{1}{2}$  months.

Friday Dec. 14: The drought and the southeaster continue. Bleak rain clouds and thunder over Gubu Sari again about mid-afternoon.

Slept badly last night, and feeling pretty seedy this morning, I stayed in camp and sent the boys out to collect. They went up the waterplace gully, collecting only six numbers. Most interesting is an orchid with green, ~~xxx~~ 3 unopened flowers curiously laterally flattened in the bud. Have not seen the genus before, that I recall.

Saturday Dec. 15: Hot and dry although there was a light shower from a thunderstorm which built up over Gubu Sari ~~XXXXXXXXXXXXXXXXXXXX~~ during the morning.

Spent 10 hours on an excursion up the Gara River by canoe. Has Raiga with me. Followed the river what must have been a good 8 miles to where it became generally shallow and partly choked with drift trees from the eroding banks. Still tidal to that point, though the water fresh for the last mile or so. The lower reaches of the river carry very tall mangrove forest of good timber volume. A small leaved *Bruguiera* is the principal tree. Trees must have been at least 100 feet high, the trunks startlingly straight, and the larger ones a good 2 feet in diameter. The finest mangrove forest I have seen anywhere. The area may not be great enough to make it attractive commercially.

A mile or less from its mouth, the river divides. The eastern branch, which is apparently the larger, is called the Gara, the western, which heads on Gugu Sari, is the Haralma-ama (Modewa on the 4-mile map). About half way to my farthest point was a hamlet called Gara. We went through the coastal line of hills, and what appeared to be a second line. Beyond that no hills were visible. Apparently the interior flattens as it does up the Dawa Dawa river. At that rate there must be a very extensive central depression in this southeastern peninsula of the mainland, of which the Sagarai Valley ~~is~~ is only a part.

Finding botanizing very poor on the river (only 6 plants collected in the whole morning) I returned to Gara hamlet. High hills rise steeply there, almost from the river-bank. Ham of only three houses, two of them very small and open at the ends, the third in bad repair. Only one family was at home (the others out making sago perhaps.) A man, his rather shrivelled and lavishly toothed wife, two small girls and a smaller boy. The children were charming and not the least bit afraid of me. The man brought me a pineapple and a papaya, and later, though I had only one stick of tobacco to give him, a small bunch of bananas, some sweet potatoes and a taro. He insisted that his wife ~~xxx~~ cook a pot of food for my two boys and guide. The boys could eat only half of the boiled sweet potatoes mandioca, cooked under a covering of banana leaf in an earthenware native "saucepan".

After lunch I botanized up the rocky gully which brings running water past the hamlet and got some interesting plants. Included were a shrub of the *Turraea*-like (new?) genus of which I collected a species on Normanby Island, and a soft shrub with the general



between it and Mt. Nelson on the map. It is a Nelson, and it was the only peak that Chalmers climbed (Baig's assertion). That must have been the "Old Man" Mount-ain. Chalmers came from the Nelson River directly opposite the island where Chalmers had his mission station. Established in the 1870s. Chalmers was murdered by the headmen of the Baig's country in 1900. I think. 1900. Natives have a long memory for such things.

Gathered 13 seeds of one of the feather palms (428382) for the Fairchild Tropical Garden. That makes five species so collected on this trip.

The natives today are catching many sailfins, of which there is a school in the bay. For lunch I had a small mackerel-like fish, another and bigger than my mackerel I know, and very good too. Here as at Ova Bay we are getting all the fresh food we need. Here it is, so far, fish, sweet potatoes and bananas. There can not be any great abundance of food in this area. The village seems too far for the market garden I have seen under cultivation, and there has been no rain for 12 months.

Friday Dec. 14: The breeze and the southeaster continue. Black rain clouds and thunder over Ova Bay again about mid-afternoon.

Went back last night, and feeling depressed this morning. I stayed in camp about the boys out to collect. They went up the waterfall gully, collecting only six numbers. Last interesting is an orchid with green, and 3 numbered flowers completely laterally flattened in the bud. Have not seen the same before, that I recall.

Saturday Dec. 15: Had my day although there was a light shower from a thunderstorm which built up over Ova Bay and ~~XXXXXX~~ during the morning.

Spent 10 hours on an excursion up the Ova River by canoe. The Raig's with me. Followed the river what must have been a good mile to where it became generally shallow and partly choked with drift from the Ova River. Still tried to find out, though the water flows for the last mile or so. The lower reaches of the river, very tall mangrove forest of good timber value. A small level bridge in the middle of the river. There must have been at least 100 feet high, the forest certainly tall, and the larger ones good 1 foot in diameter. The forest mangrove forest have been removed. The area may have been great enough to make it attractive commercially.

A mile or less from its mouth, the river divides. The eastern branch, which is somewhat larger, is called the Ova, the western, which heads on Ova Bay, is the Ova. We went through the coastal line of hills, and what appeared to be a second line. Beyond that no hills were visible. Apparently the interior flattens to a floor up the Ova River. At that rate there must be a very extensive central depression in this southeastern peninsula of the mainland, of which the Ova Valley is only a part.

Nothing botanical very good on the river (only 3 plants collected in the whole morning). I returned to Ova Bay. High hills were steeply forested from the riverbank. One of only three houses, two rather very small and open at the ends. The third in bad repair. Only one family was at home (the others out making coco palms). A man, his father arrived and I finally got out. Two small girls and a smaller boy. The children were charming and not the least bit afraid of me. The man brought me a pineapple and a papaya, and I left, though I had only one stick of tobacco to give him a small bunch of bananas, some sweet potatoes and a taro. He finished that with one stick of food for two boys and girls. The boys could eat only half of the boiled sweet potatoes, cooked under a covering of banana leaf in an earthenware native "kumogog".

After lunch I pottered up the rocky gully which brings running water past the house and got some interesting plants. Included were a shrubby tree-like (new) genus of which I collected a species on Ova Bay Island, and a small shrub with the general



aspect of Psycgitria, but with minute flowers. Got in all 15 numbers. These days are too hot for field work between about 11 and 5 o'clock. It was hot indeed in the canoe on the open river.

December 16, Sunday: Hot and rainless, though the heat somewhat modified by a fresh to strong SW breeze. More thunder back over Gugu Sari.

Spent the morning working on materials on hand. Called the rest of the day Sunday. The boys all attended "prayer meeting" in the village. There was communion, too, administered by a middle-aged native Suau teacher visiting from Suau Island.

This teacher, Bonono, dropped in to talk with me in the afternoon. He says this coast has much rain in the months of January-September. There is a regular dry season October through December. Like all natives of the far east and he talks of the many Americans who were here during the war. Opinions of the Americans seems generally high. Their friendliness impressed the natives. There was a radio station on Susu Island, one of a chain along this coast ( radar, too?).

Our Gara host of yesterday came down the river with his wife and small ~~boy~~ son today for church. I gave him good presents of food and tobacco.

Further on the native opinion of Americans, as amplified by Bonono, is the impression or conviction that they are soft marks. He put it on me first for gun cartridges, then for the trade tobacco (surprisingly for a Protestant missionary, he carried a black old briar pipe). I gave him some aspirin for a head cold, and a mantle for his Coleman lamp. This from a man high enough in his mission to give the sacrament.

Monday, December 17: Heat and drought continue. The forest of the slopes is so very dry that the leaves of the smaller trees are now wilting. The village water supply has gone down alarmingly since my arrival and inspection a few days ago. The water, issuing from the rock, is quite good, however. Am told that the supply sometimes gives out, when water has to be carried to the east of the village and a good mile from the resthouse.

Botanized along the crest of the high ridge which rises close behind the village to a maximum altitude of 1450 feet, according to the 4-mile map. Only 7 numbers for five hours in the field. Went through one driedout garden of sweet potatoes and cassava on the lower slopes, and some second growths on the sites of former gardens, but most of the ~~vegetables~~ vegetation was a poor type of primary rain forest.

Feeling unwell with what must be a "virue complaint". Had much the same sort of thing on Sudest some months ago. Queer numb feeling in the head, stomach upset in a dull way, some vomiting.

Tuesday Dec. 18: Cloudy day with wind almost from the west, (SW yesterday and the day before. A few sprinkles of rain in the afternoon.

Spent night hours in an excursion up the Harala-ama River by canoe, Raiga with me, although he had never been far up the river before. Could go only about 5-6 miles. Not enough water above that, and for a couple of miles below the canoe had to be dragged gravelly rapids and the stream was much cluttered with trees that had fallen in from actively eroding banks of reddish yellow soil. The Harala-ama is much smaller than the Gara. I thought it might offer an easy approach to the Cloudy Mountains for some future biologist, but from the highest point a canoe can be taken on the tide, it must be a distance of about two hours walk from the foot of the mountains. According to Raiga, there is only (a) small village up the river. He walked through the floodplain forest of the riverbank for the best part of a mile from where the canoe was left, and reached an old village site of a small hillock. The village, according to Raiga, was called Gunaheda. Some coconut palms and crotons there, in surroundings of grass. Collected only 13 numbers, the only ones that looked interesting being a rubiaceous shrub of the undergrowth and a Syzygium with big yellow flowers.



December 10, 1944. Forwarded to the next commandant of the  
Moffett Naval Air Station, Moffett Field, California.



The unwellness still up me, especially in the stomach.

Wednesday Dec. 19: The drought was broken last night. Was awakened at 9 o'clock by a heavy rain squall from the southwest blowing into the resthouse. Rain was still falling when I went to sleep again. Today overcast, Light SW breeze. Squally light showers until about the middle of the afternoon. Should think there has not been more than  $\frac{1}{2}$  inch of rain all told.

Prepared yesterday's plants, and not feeling up to field work, sent the boys out. They managed to get six species not previously collected here.

Doing some letter writing. I can never catch up on letters I owe on this trip.

~~Thursday Dec. 20: Sunny day with light SW breeze; no rain.~~

Thursday Dec. 20: Sunny day with light SW breeze; no rain.

Still unwell, but went into the field for what will be the last day of botanical collecting on the expedition. Worked the big creek  $1\frac{1}{2}$  miles east of camp. Rather my boys did most of it. I had to sit down and let them do most of the searching. Best plants of about a dozen are further material of the queer epiphytic orchid which was collected a few days ago, and a tall, slender Caryota. The latter quite a different looking palm from the stout species widely distributed in this region. I have never before, that I recall, seen a slender Caryota.

Every evening one or more men walk past the resthouse towards the village carrying fat cylindrical bundles of sago wrapped in fresh palm leaves. In this season of shortage of food in the gardens, sago is an important food here. It grows in good supply on small bits of ground that is swampy in the rainy season. Reaches a good big size. All the plants have been the spireless sort.

Friday Dec. 21: Day mostly overcast. Breeze back in SE but only a small swell dumping on the beach. A slight shower in mid-afternoon.

Still have some nausea, but an utter weariness, which has oppressed me for days, is disappearing. Still think the trouble is a "virus condition."

Drying materials. Sent all boys out insect hunting. Results not very good. The day too dull.

Botanical collections for the area add up to the miserable total of 84 numbers, 629 herbarium sheets. I made a mistake in coming to the mainland to botanize. Should have gone with the others to the Trobriands. There, if as expected, plant collecting proved poor on the coral limestone, at least I should have had opportunity to see and photograph one of the most interesting people in the SW Pacific. The influence of missions on the Modowa coast dates back to the '70s, and the people show it. They are a most colorless churchgoers.

In insects, collecting for butterflies has been very good. The mainland richness, lacking on the islands, is apparent in new things coming in every day. Today there was a swallowtail of a most curious blue. Odonata have been few— not more than four or five species of the dragonflies, and about the same in damselflies. Catches at the lamp have been very meager. The weather has been too dry for any night swarming except one night, a few ants.

My recently Christienized Gara friend turned up late this afternoon with his wife carrying, as a present, a basket containing 2 mud crabs, a pineapple, a couple of papawa, and some nice big red sweet-potatoes. I gave tobacco in return. He remarked that the Modowa people were all right in their way, but they won't give you anything.

Part of the conversation was carried out through Kim the cook, in the local Susu language, which I did not know Kim understood. He appeared to speak it quite well.



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Thursday Dec. 30. Sunny day with trace of snow.

that I recall seen a number of times. I have never before seen from about twelve miles distant in this region. The latter during a different looking forest a few days ago, and a black cat. The latter during a different looking forest a few days ago, and a black cat. The latter during a different looking forest a few days ago, and a black cat.



At least, the Gara man understood without any difficulty. It is well known that the New Guinea native has a facility for languages. Was surprised, however, to find that Kim speaks seven: Susu, Mailu, Motu, Milne, Bay, Dobu, Bwaidoga (his mother tongue of Goodenough Island) and a passable English. He explained that in some of these languages his knowledge was only as much as the English we ordinarily speak to the boys.

Saturday Dec. 22: Hot and sultry; much overcast; slight S to SE intermittent wind; no rain. Two days ago there was a radio report that the "wet season" had begun at Lar and in Australia. This is the second such report. The first was weeks ago.

Packing up and the boys hunting insects. Made photos of all the boys in the afternoon (Kim, Edewawa, Galuwina, Taugova).

Sunday Dec. 23: Ernie Everett arrived early with the "Sirius", having stayed the night at anchor at Delina Point, and by 8:25 we had the cargo aboard and had started for Samarai. Arrived at 12:40 pm.

Ailsa and Ted Gribben had returned from Australia by Corsair yesterday, and with Dusty, were just leaving for Nou Nou when we tied up. Ted's operations for cataracts were successful. They were leaving on the "Kedeluma" and will return January 2nd. Meanwhile I am in occupation of Dusty's house, with an icebox full of good food and wine for Christmas.

Rus and Lionel had returned from the Trobriands on Thursday. They came back on the "Chinampa", the only vessel scheduled to make the trip in from the Trobriands before Christmas. Boats have not made the trip conveniently for them, and they have lost a lot of time in consequence. Little more than a week was spent on the Trobriands. They based at Liluta, somewhere about the center of the main island, Kiriwina. The mammal take was good for the time spent there. A total of 89 specimens (42 skins and skulls) of 19 species. Included were Phalanger orientalis, Echymipera, Protemnodon, Rattus ruber, Hydromys. The rest were bats. They were given the use of the Catholic Mission at Liluta, the school being closed down to make this possible (or was it for Christmas?). The Lumleys loaned them a motor truck (there are wartime roads going to most parts of the island of Kiriwina). A number of caves were visited, mainly by Lionel, I understood. The Hydromys was got by fortunate chance. Lionel, out jacking one night, noticed a native carrying it, transfixed on a spear. It was on a swampy part of the island, and was crossing from a dried out pool to a place where water remained. The Trobriands were experiencing very dry weather. The vegetation was as I anticipated: nearly all second growth rain forest, with a fringe of primary around the shores.

Monday Dec. 24: Got my cargo ashore. Called on Government. Sent telegram Womersley at Lae for an export permit for the Botanical collection (14,700 herbarium sheets, 229 bryophytes), and to Department of Agriculture, Port Moresby, for permit to export the Zoologica, materials:

1382 Mammals  
822 Herps  
20 birds  
57 Freshwater fishes  
50,000 Insects  
250 Ectoparasites

Listed my ethnological gatherings: a small lot of 55 items for export. Will wire after Christmas for permission to export these. Have a dozen duplicate pieces for the Govt. Anthropologist.

Dis some organization of the cargo in preparation for the big packing around. Rus says he has about finished his packing, but things of his are still lying around. Rus left early in the afternoon to spend Christmas at Sedeia Catholic Mission. He will leave Samarai for home on the 28th.



At least one game was underfoot without my difficulty. It is well known that the  
new native has a feeling for language. was surprised, however, to find that  
the game was not. He said, "I have never seen a game before." He explained that in some of the  
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Christmas has set in in town. It started with a big party at BP's batch on Saturday night and would appear to have been going more or less over since then.

Tuesday Dec. 25: Had a drink with the Cottrell-Dormers in the morning; Christmas dinner with Ken and Mildred Lee: spent the afternoon in the house of Fred and Joyce Craig. Had a very pleasant time but was glad to break away and go home at seven O'clock.

Rus went over to the Catholic Mission at Sedeia yesterday afternoon and returned to Samarai sometime this afternoon.

For two or three afternoons rain has fallen on the mainland, just across Fhina Strait from Samarai, but not more than a few drops here on the island. I have never seen Samarai so dry. The ground is parched, the streets dusty, the grass the color of straw. The water shortage is becoming serious. For a week now BPa have been bringing water on boats for their native compound.

Wednesday Dec. 26: Boxing Day, and a holiday. The drought continues.

Did some paper work: making up boys' wages accounts, sorting records and correspondence, etc.

A native swimming off the reef with a fishing spear, was taken by a shark today. The third fatality of the kind in the neighborhood in little more than a week. One man was taken at Kwato, the other at Susu.



On Saturday night and would appear to have been going more or less over since then. On Saturday night and would appear to have been going more or less over since then.

Thursday Dec. 12: Had a quick trip to the Coffeyville in the morning. On Saturday night and would appear to have been going more or less over since then.

On Saturday night and would appear to have been going more or less over since then.

For two or three afternoons there has been a lot of rain and just before this. On Saturday night and would appear to have been going more or less over since then.

Wednesday Dec. 13: Foxing Bay, and a solid day. The morning continues.

Did some paper work: making up boys' wages accounts, working records and correspondence, etc.

A native swimming off the reef with a flaming spear, was taken by a glass today. The initial fatality of the kind in the neighborhood in little more than a week. One was taken at Kwebo, the other at Oua.



121  
~~164~~

Thursday Dec. 27: The drought continues. Heat somewhat lessened by a SE breeze which still further dries out the ground.

Got a good start with the main packing job. Most of the black boxes are filled and ready for crating. Womersley radioed that he has issued permits for the export of the botanical collection to Holland and the United States. There is no word about a permit for the zoological collection, for which I applied Christmas Eve. Placed with the ADO this morning a request for export of the anthropological items --55 in all, not including some personal items from earlier expeditions which I sent up from Australia in March.

Rus ran true to form to the end. I had to pack his traps, which I found unsorted in three different places in the godown, his dugong skull, etc. A cream can containing a dugong fetus, which, in charge of Lionel, went out to someone to be soldered on Christmas Eve, is missing. I have urged Rus to try and trace it tonight. He leaves for Milne Bay and Carsair at 3 am.

A big shark hunt today, in which Lionel took part, resulted in the capture, by line, of a brute about 9 feet in length.

Friday Dec. 28: Weather as yesterday. The breeze at last does something to cut down the heat in Bunting's godown, where our packing is being done.

Lionel worked with me all day, doing most of the carpentry, and we made very good progress with the packing and crating. A full day tomorrow should about see the end of the job. Packed my typewriter and have borrowed the portable from Dusty's office.

The shark fishing continued last night, and a ten-footer was caught and killed. Lionel says he was out most of the night.

I hear that a big 60,000 gal. concrete rainwater tank at the wharf, which is shipping an emergency supply for the town, is dry and Government is being appealed to for assistance in bringing water to the island.

Saturday Dec. 29: Slight change in the weather: rain clouds over Normanby Island, showers over Loani on the mainland, a few drops of rain in Samarai.

Worked all day at the crating job and still have about half a day's work to do. Have to make two crates, and that takes time. Four big packing cases, containing 59 bundles of herbarium specimens, are ready to go to the Rijksherbarium at Leiden. Another eleven bundles and all the bryophytes and sundry packets of plant materials will go to the Museum in field boxes and from there be sent on to Leiden.

This afternoon began a  $3\frac{1}{2}$  day holiday weekend for Samarai. There will be a cricket match between Samarai and Port Moresby, a Catalina having arrived this afternoon with 30 players and friends from Moresby.



Thursday Dec. 27: The drought continues. Heat somewhat lessened by a breeze which still further dries out the ground.

Got a good start with the main packing job. Most of the black boxes are filled and ready for crating. Tomorrow I intend that he has issued permits for the export of the botanical collection to Holland and the United States. There is no word about a permit for the zoological collection, for which applied Christmas Eve. Filled with the AMO this morning a request for export of the anthropological items -- 55 in all, including some personal items from earlier expeditions which I sent up from Australia in March.

The van was to turn to the end. I had to pack his traps, which I found unsorted in three different places in the godown, his shotgun shells, etc. A crate containing a camera lens, which, in charge of Lionel, went out to someone to be collected on Christmas Eve. I have given the box to him and there is tonight. The leaves for Milne Bay and Samarai, at 3 am.

A big shark came today, in which Lionel took part, resulted in the capture of a fine, of a size about 2 feet in length.  
Friday Dec. 28: Weather as yesterday. The breeze at last does something to cut down the heat in Buiting's godown, where our packing is being done.

Lionel worked with me all day, doing most of the crating, and we made very good progress with the packing and crating. A full day tomorrow I could about see the end of the job. Packed my typewriter and have borrowed the portfolio from Lionel's office.

The shark fishing continued last night, and a ten-footer was caught and killed. Lionel says he was out most of the night.

I hear that a big 60,000 gal. concrete rainwater tank at the wharf, which is shipping an emergency supply for the town, in dry and Government is being appealed to for assistance in bringing water to the island.

Saturday Dec. 29: Slight change in the weather: rain clouds over Bontarby Island, showers over land on the mainland.  
A few drops of rain in Samarai.

Worked all day at the crating job and still have about half a day's work to do. Have to make two crates, and that takes time. Four big packing cases, containing 25 bundles of herbarium specimens, are ready to go to the Rijkshuis van Leiden. Another eleven bundles and all the dryboxes and sundry packets of plant materials will go to the museum in field boxes and from there be sent on to Leiden.

This afternoon began a 3 1/2 day holiday weekend for Samarai. There will be a cricket match between Samarai and Port Moresby, a football having arrived this afternoon with 30 players and friends from Moresby.



122  
265

Sunday Dec. 30: Intensely hot and no rain. Hear that a day or two ago the temperature in Samarai went up to 92 F., with relative humidity at 82%. Said to have been the hottest day ever recorded here.

Spent the afternoon writing letters. There was a cricket match between Port Moresby and Samarai which I did not attend. The visitors scored 170 odd to the home team's 120 or so. There must have been some fairly good cricket.

Monday Dec. 31: An overcast, still day. A northerly swell breaking on the fringing reef of the island late in the day. We seem to be close to rain.

Two hours work this morning finished the crating job. This afternoon I typed lists of box contents, and crate contents, did a detailed valuation of the cargo, and wrote Buntings giving particulars for the shipping documents. Am putting an insurance valuation of £5000 on the shipment to the Museum, £1500 on the Rijksherbarium consignment.

Tuesday Jan. 1: A good fall of rain between noon and 1:30 pm.

Took part in some of the New Year's Day social activities: drinks at Dick Paul's house in the morning (a big affair for the two cricket teams and the elite of the island; lunch with the Fred Merediths.

Dusty and Ailsa returned late in the afternoon from Wadelei, Ailsa's trade store in Hughes Bay on Fergusson Island.

Wednesday Jan. 2: A strong north breeze and the coolest weather Samarai has had for a long time.

Had to stir up officialdom about my export permits which were applied for by radio on Christmas Eve. Womersley's permit to export the botanical collections came in a mail that arrived by ship from Port Moresby this morning. Cottrell-Dormer, at my request, called the Department of Agriculture about permit to export the zoological collections. ADO Crai Symons called up the Government Anthropologist re permit to export artifacts.

All the boys but Kim were paid off today. Their pay at 25/- a month comes to £11-5-0, besides which they have 10/- bonus pay for six months and 5/- Sunday pay for 24 Sundays worked since the beginning of July. For natives of their type, they are rich men for the time being. Total pay £20-5-0.

Have been offered passage to Milne Bay on the government trawler "Huon" tomorrow to meet Carsair. The "Kitava", which meets the plane every week for the agents will be leaving Samarai at the unearthly hour of 3:30 am Friday. The "Huon" (Capt. Bill Johnston) leaves at 1 pm tomorrow and will stay overnight in the Bay.



Monday Dec. 30: Relatively hot and no rain. Heat about 80° F. two ago the temperature in Gammat was up to 92° F., with relative humidity at 82%. There have been the hottest day ever recorded here.

Spent the afternoon writing letters. There was a cricket match between Port Moresby and Samarai which I did not attend. The visitors scored 170 and the home team 120 in all. There must have been some fairly good cricket.

Monday Dec. 31: An overcast, still day. A northerly swell breaking on the fringing reef of the island late in the day. We seem to be close to rain.

Two hours work this morning finished the existing job. This afternoon I typed lists of our contacts, and these contacts, and a detailed valuation of the cargo, and made things giving particulars for the shipping documents. In getting an insurance valuation of \$5000 on the shipment to the museum, \$1500 on the archaeological collection.

Tuesday Jan. 1: A good fall of rain between noon and 1:30 pm.

Took part in some of the New Year's day social activities. Arrived at Dick Paul's house in the morning (a bit early for the two cricket teams and the slide of the island) lunch with the two families.

Barry and Alisa returned late in the afternoon from Rabaul. Alisa's trade store in Hughes Bay on Tararua Island.

Wednesday Jan. 2: A strong north breeze and the coolest weather. Gammat has had for a long time.

Had to return to the office about my export permits which were applied for by me on 11th Nov. Gammat's permit to export the botanical collections came in a mail that arrived by ship from Port Moresby this morning. Government, at my request, called the Department of Agriculture about permits to export the botanical collections. The Dept. of Agriculture called up the Government and asked for the permits to export material.

All the boys and girls were paid off today. Their pay at 25/- a month comes to \$11-5-0. Besides which they have 10/- bonus pay for six months and \$4-0-0 bonus pay for 24 months worked since the beginning of July. For half of their pay, they are rich men for the time being. Total pay \$20-5-0.

Have been offered passage to Milne Bay on the government steamer "Racon" tomorrow to meet Gammat. The "Racon", which meets the plane every week for the agents will be leaving Gammat at the monthly hour of 3:30 am Friday. The "Racon" (Capt. Bill Johnston) leaves at 1 pm tomorrow and will stay overnight in the Bay.



Thursday January 3: My last day in Samarai developed into a last-hour rush. Was notified at 11:15 that the "Huon" would leave at noon, instead of one o'clock. Had therefore to say hurried good-byes.

We left Samarai at 12:05 and arrived at Gabagabuna, Milne Bay about 4 o'clock. Good smooth passage; hot, still day.

The battered truck of a sawmiller named Brodie was at the wharf and gave us a lift to the trading post of Hans Jansen, about 2 miles inland. Johnston's native wife, Agnes, with us on her way back to Port Moresby, where they have a home.

Hans a big gray clean-shaven old Dane of 70 years. Married to a native woman (a kindly little old woman) and has two sons. Has been in Papua over 40 years and in Milne Bay over 30. Was 17 years an overseer at Lever's Gili Gili Plantation. The last 8 years as head overseer. Refused evacuation in World War II and ended in charge of the Milne Bay refugees at Modewa. A good Host. Sound old man with an interest in astronomy.

Friday January 4: Carsair has its' passengers entirely at its' mercy, and uses them accordingly. Today, we were told in Samarai, there would be two planes. One would go on to the Trobriands. The second, a special carrying Dentist Ken Baldwin to Milne Bay, would arrive first, at 8 A.M., and take us into Port Moresby. The first plane came soon after 9:30 and went on to the Trobriands; second about 1:10, ten minutes after the other came back from the Trobriands and had our baggage on board. We were transferred to the second plane, left at 1:55 and set down at Jackson Airport, Port Moresby at 3:50. A good flight at 3,000 - 3,500 feet.

The Port Moresby area has had very good heavy rains and in consequence the savanna hills, which are dry and brown through most of the year, are bright green. Have never seen this dry area so bright and lush.

Big work is in progress on a third, very long runway, at the airport. A big service hanger nearing completion.

Am staying at the Papua Hotel, 2-12-0 a day inclusive tariff for a single room. Have an air booking by Qantas for Lae on Tuesday.

Talked with a Californian oil driller, who arrived today enroute for the Morehead River. He is in the employ of an American contracting company which drills wells for A.P.C. (Australian or Australasian Petroleum Company) Says American drillers put down a hole in 6 months that Australians or English would take 12 months to complete. He is on a two-year contract. Has also drilled in Arabia.

Saturday January 5: Very hot; no rain. Mosquitoes were rather troublesome in the hotel dining room last night. After a respite of some years, the heavy black squalls called Guba are said to be a feature of this wet season.

Saturday is a full holiday for government offices in Port Moresby (and Lae) so could not get any business done today. Bought for 5-2-6 (ca.\$11.) a pair of shoes which would have cost \$20 in New York, or more. Talked



FOUR STAR  
UNION SKIN

MADE IN U.S.A.  
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with A. E. (Arthur) Davis, manager Bank of New South Wales, who took me to the Papuan Club. Saw there Frame and Bernie Ryan of B.P.S., Crisp of Steamship Trading Company, Alan De Groen, E. A. James, etc. All spoke of the earlier expeditions, especially of the Gube and her crew. An A.P.C. man said his company is spending Four and one-half million pounds on oil prospecting this financial year.

Spoke with Ken Slater, Animal Ecologist (first a herpetologist) who has been in the west lately. Says he saw on the Bitouri River, a western tributary of the Fly, what he was pretty sure was red Wallaroos. Big animals and very red. Ridy savanna forest country. Is going back to collect a series. Offers the museum a male and female if he can get enough material. Slater has the Taipan from as far east in Papua as Rigo. The Papuan snakes is a new subspecies with red stripe down the back, recently described by Slater.

Sunday January 6: Breezy day from S.W. not so hot. Heavy thunder-clouds inland. No rain here. Had Dr. Dorothy Shaw (Plant Pathologist) to lunch at the hotel. Later visited the Public Library, then sat on the beach with Smith of Cadbury-Fry and his wife and small son. Smith came from the gold coast some 8 months ago. First visited New Guinea to look for a suitable area of land on which to establish a cocoa plantation for his company. This project was dropped for reasons I do not know. Smith now going to Rabaul, where he will be stationed to look after Cadbury-Fry interests. New Guinea cocoa is of good quality, but has a "sharp" flavor. It is being used in Australia to blend with Accra cocoa. The Kerivat Experiment Station visitors are given a piece of chocolate made from Accra and one from New Guinea kernels and asked which they prefer. Most people so far have chosen the local flavor. The principal market in Australia is for milk chocolate.

Monday January 7: More or less overcast, cooler day with light rain about 5 P.M. into evening. A big day of official visits. Started with my air bookings with Qantas. They generously rerouted me to utilize my unused Samarai - Port Moresby return ticket from P. M. to Lae and back. Had to pay 15 pounds odd on the transaction.

At Konedebu (Govt. headquarters) first called on forest dept. to see Director Jim McAdam, who was out.

Then visited Dorothy Shaw at Dept. of Agriculture, and after that Director Dwyer, who was about to leave his office for a Land Board meeting. Found from him, however, that a permit had been issued for the export of our Zoological collections. Saw a copy of the telegrams (one to me, one to Collector of Customs, Samarai) and discovered that as a condition of export we were required to give the types to the P. N. G. Administration.

Went then to Dept. of Native Affairs, where I saw first Julian, Govt. Anthropologist, then Director Roberts. The department had cleared our "antiquities" for export. Julius told me over morning tea that during the past year about 12 anthropologists had visited P.M.G. on special projects; his own work is practically confined to trouble areas. Roberts very cordial; spoke mainly of the expansion of government posts in the territories, and think there are over 80 now.

Finished the morning with a talk with Claude Champion, who is now







acting head of civil affairs, who drove me back to the hotel for lunch.

After lunch, posted the palmseeds for which I have been awaiting an export permit, which is no longer necessary for such things. Picked up my revised air ticket. Then to Ivan Champion's (Commissioner of Titles, or something) office in town. Thence back to Konedobu, where I first saw McAdam. Very cordial and talkative on forestry matters, especially the reforestation of *Araucana cunninghamii* and *A. klinkii* in the Bulolo timber exploitation area. They know, from early work in Queensland, how to regenerate *cunninghamii*. *Klinkii* is still a problem. The former is the better timber, the latter, a new commercial timber, has been most publicized on the market.

After McAdam, visited Dwyer. Very talkative. Finally we got around to discussing the export permit his department had issued. The demand for types was a mistake, of course. I do not trust Dwyer, or Henderson, his #2, who is now away on leave.

Had an interview with Administrator D. M. Cleland at 3:30. He seemed in a hurry and did not have much to say. Then called on Steve Loneragan, who is now Acting Asst. Administrator. Ended the day with a visit to the club with Claude Champion.

At my table in the hotel today is a Dutchman named Roos, a building contractor at Hollandia, on his way back from Australia. Says there are now about 2,000 white people at Hollandia. Until recently the only buildings were U. S. Wartime barracks and quansets. Now some 500 new places are being put up. The Dutch feel insecure in west New Guinea. They don't trust the UN to make an ownership decision favorable to them. Many eurasians have been settled in New Guinea since the war. The settlement scheme a failure. Too many of the half-castes "belong to good families" and will not do hard work. No business being done with Indonesia, except perhaps in air services, which Indonesians plead with the Dutch to carry on. Most building materials come from Singapore. Cheaper than Australian. Local New Guinea supply of timber is too undependable.

From Ivan Champion I learned that the P. N. G. Government still maintain a line of 5 or 6 patrol posts along the Dutch Border.

During the morning I visited the Administration Museum with Julius, Judge Bignold, and Miss Jones (Hon. secretary). A committee was formed and the museum started last year. Collection of about 2,000 artifacts housed in the old Governor's house and office building. Simple but effective arrangement. Some very good things, mainly (the most conspicuous) from the Sepik, Manus, and Rabaul coast.

Tuesday January 8: Left Port Moresby at 7:50 A. M. by Qantas DC4 "New Guinea Trader" and arrived Lae 9:10. Smooth flight but could see little of the country and none of the main range, for cloud.

Was met by John Womersley, who took me to the Hotel Cecil (Mrs. Steward, an old timer who knew Archbold, Rogers, etc.) Later in the morning visited the forest Herbarium, and John showed me through the Botanic Gardens. Did not see much of the Herbarium. There is room enough for the 15,000 sheets (in Merrill boxes), but the walls, under







wide eaves, come only half way from floor to roof, and rain can blow in. The good ventilation probably saves the place. Two women and two natives work in the Herbarium. Botanic Gardens are on a forest reserve 60 (66?) acres in area (another, adjoining, 40 acres are available under the town planning scheme). High old river terrace and ground about 50-80 ft. lower, but well drained, are represented. There is a permanent small stream, a little sago swamp, and a strip of original tall old rain forest under the break of the terrace. The grass is kept mowed and some planting has been done. A big slat house contains a good new collection of native (and a few hybrid) orchid, begonias, ferns, etc. There are great possibilities in the garden. A new reinforced concrete herbarium and office building should be put up this year.

In afternoon John drove me some miles along the Bulolo road to see the country. Following us in his own utility was R. N. (Ron) Paine, an entomologist, here for 18 months for the Fijian Government on investigation of the banana scale moth. He found larvae of one of his moths on Heliconia. Returning to Lae, we called in at the cocoa plantation of Henty, formerly of the Dept. of Forests, who has 40 acres under crop and proposes to plant 120 acres. The cocoa is doing well. A new crop in which chocolate manufacturers in Australia are showing great interest. MacRobertson's have a plantation not from Henty's. Henty is the last of the old pioneer family of that name in Victoria. The last of the family fortune is invested in the cocoa.

In evening, John and Mary Womersley had Paine and I to dinner in a Chinese restaurant (not too good). And Paine later showed some good kodachrome slides he has made in New Guinea.

Wednesday January 9: Day spent on a visit to the Highlands with John Womersley on the DC 3 which the government charters to do a round of the outstations every Wednesday. Left Lae at 7:50 and landed at Garoka some 40-50 Minutes later. Rus Webster of Buntings met me at the airport. Garoka is the center of an area in which, scattered over many miles and served by several airdromes, coffee is being planted by Europeans. Country is almost entirely deforested, except for a few trees along riverbanks and in ravines. Heavy native population living in bee-hive houses. I understand that the older plantations are just about coming into full bearing and this is a critical time for the young industry. (A visiting expert reported the soil unsuitable).

From Baroka we flew to Minj passing over the Chimbu Valley and government station on the way. Minj is in the great Whagi Valley, at ca. 5500 feet. Natives live in small hamlets and both men and women wear a sort of sporran of netted string. Some coffee planting. (Probably more scope for European settlement in the Wagi than in the Garoka area). Got the loan of a Land Rover from the ADC at Minj and drove across the valled to Nondugl, a distance of about 15 miles by fairly good dry-weather road. At Nondugl, the government and Sir Edward Halstron have a joint project in sheep raising. Have ca. 1,000 head of Romney Marsh breed in charge of Frank Pemble-Smith of the Dept. of Agriculture. Various flukes have been troublesome. Extense rotation of grazing, in small paddocks is now practiced to control the fluke. The original object was to introduce sheep into this grassy valley as an extension scheme for the natives, but the natives have shown no interest.



# ORIGINAL SKIN

The first of these is the fact that the skin is a living tissue, and as such it is constantly changing. The cells of the skin are constantly being replaced, and the old cells are being shed. This is why the skin is always in a state of flux, and why it is always changing. The second fact is that the skin is a protective barrier. It is the first line of defense against the outside world, and it is the last line of defense against the inside world. The skin is the only organ that is in direct contact with the outside world, and it is the only organ that is in direct contact with the inside world. The skin is the only organ that is in direct contact with both the outside world and the inside world.

The third fact is that the skin is a sensory organ. It is the only organ that is capable of feeling touch, pressure, pain, heat, cold, and vibration. The skin is the only organ that is capable of feeling the texture of the outside world, and it is the only organ that is capable of feeling the temperature of the outside world. The skin is the only organ that is capable of feeling the pain of the outside world, and it is the only organ that is capable of feeling the heat of the outside world. The skin is the only organ that is capable of feeling the cold of the outside world, and it is the only organ that is capable of feeling the vibration of the outside world.

The fourth fact is that the skin is a secretory organ. It is the only organ that is capable of secreting sweat, oil, and mucus. The skin is the only organ that is capable of secreting sweat, and it is the only organ that is capable of secreting oil. The skin is the only organ that is capable of secreting mucus, and it is the only organ that is capable of secreting sweat. The skin is the only organ that is capable of secreting oil, and it is the only organ that is capable of secreting mucus. The skin is the only organ that is capable of secreting sweat, oil, and mucus.

The fifth fact is that the skin is a storage organ. It is the only organ that is capable of storing fat, and it is the only organ that is capable of storing water. The skin is the only organ that is capable of storing fat, and it is the only organ that is capable of storing water. The skin is the only organ that is capable of storing fat, and it is the only organ that is capable of storing water. The skin is the only organ that is capable of storing fat, and it is the only organ that is capable of storing water. The skin is the only organ that is capable of storing fat, and it is the only organ that is capable of storing water.

# FOUR STAR



A wildlife section of Nondugl is in charge of Fred Shaw Mayer, well known collector of birds and mammals. This is a private project of Halstron's. Mayer has been in charge for 3 years. Is thoroughly wrapped up in his charges. The property has been well developed with big cages, ponds, and plantings for shelter, shade and ornament. Many spp. of birds of paradise are doing well in captivity. There are Salvadorini ducks, 3 spp. of Dendrolagus, Gaura pigeons, etc.

Passed over some very precipitous limestone country in the Chimbu area. The Waghi Valley appears to be in a stage of redissection which leaves long, narrow flat-topped ridges on which the natives have their gardens and oblong houses. At Garoka the few natives seen at the airport were workers who wore Ramis and in some cases flannel shirts. At Minj there was a good sprinkling in native sporrans, much decorated about the head and wearing crescent necklaces of pearlshell, and belts hung with jangling pieces of pearlshell. A well built, vigorous people in the Wahgi and very friendly. They have never given any serious trouble. A big population in the mountains near Chimbu seem to have moved there recently, for the forest has been only partly cleared. Tall trees grow in the gardens, as on the upper slopes of the Balim Valley. Saw no planted Pandanus in the valleys.

The sun was hot on the Highlands, but in the shade it was cool. Country has a temperate and very fertile appearance. At Nondugl extreme maximum temperature is about 85 degrees, minimum 45 degrees.

Thursday January 10: To Bulolo with John and his small son, Jonathan, in an official Land Rover with a good native driver. There is a dry spell in the inland wet season (this is the dry season at Lae) and the road was in good condition. Winding gravel road. We did the 59 miles in 10 minutes under 3 hours, which was considered good going. Road rises to about 3,500 ft. where it enters the Watut (Snake River?) basin. This largely grassy. Mick Lahey runs cattle, grows poultry and vegetables in the upper part of the valley and apparently is prospering. Lower part of the valley very unstable. Much slumping and slipping on the slopes. Very steep slopes; remarkable terraces along river.

Sayed at Pine Lodge Hotel. Really a superior motel with 9 two-room cottages, each room with bath and a big building with dining room, lounge, etc., beautifully pannelled in plywood from the local mill: red cedar, N. G. walnut (*Dracontomelum*), *Elaeocarpus*, *Papudendron*, etc. A good trade exhibit in timbers.

After lunch we visited the plymill (Sneddon, manager). Big, very modern, new plant not as yet working to full capacity. Saw the process from the log yard to peelers, gluers, drying, trimming, patching, and packaging. Was most intrigued by the gantry handling of the logs, and in the peeling of the bark and the peeling of the wood of the beautifully straight logs. Many operations are controlled by electric eyes and other electronic devices. There is no packaging of plywood for the local market. For the Australian market it is done up, about 10-15 sheets together in paper. For export to San Francisco it is packed in plywood crates. All *Araucaria klinkii* being manufactured at present time.

After the mill we drove up the slopes to the logging area. Stopped at the log paddock and saw no actual handling of logs. The lower slopes



The subject of this report is the investigation of the activities of the [redacted] in the [redacted] area. The investigation was conducted by the [redacted] and the results are as follows:

The investigation revealed that the [redacted] has been active in the [redacted] area for some time. The activities of the [redacted] have been limited to the [redacted] and the [redacted] area. The [redacted] has been found to be involved in the [redacted] and the [redacted] area. The [redacted] has been found to be involved in the [redacted] and the [redacted] area.

The investigation also revealed that the [redacted] has been active in the [redacted] area for some time. The activities of the [redacted] have been limited to the [redacted] and the [redacted] area. The [redacted] has been found to be involved in the [redacted] and the [redacted] area.

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of the mountains carry extensive stands of A. Klinkii. Uneven in size, but few young trees small enough to be called saplings. An understory of mixed rain forest species. Average height of klinkii is about 230 ft., average girth about 10 ft. Govt. collects a royalty of 2/- per 100 super feet (in Queensland it is 25/- for A. cunninghamii) and undertakes reforestation. Exploitation is on a sustained yield basis on a rotation of 70 years. Fifty years considered enough to produce good mill logs. Practically all planting thus far has been cunninghamii, which germinates and establishes well. Klinkii gives trouble in establishment though it germinates fairly well and can be satisfactorily transferred to tubes.

Visited the forest station and talked with Regional Forester David Dun, who did not impress me as being really top caliber. Said he had about  $1\frac{1}{2}$  million young trees ready to go out in March. Supposed to plant 1,000 acres this operational year. Dun says that klinkii occurs on schist and sedimentary rocks, never, so far as he knows, on granit. The soil of the klinkii forest is pale gray, deep, and contains much rotten rock. Growth is not good on the sandstones, which are too dry for part of the year. Best on schist, which produce a clayey soil.

Top personnel in forest and mill are Australians, trained in Canada. About 500 men employed. Only two dredges, of original eight not in operation and they will close down in about another year. The timber operations will employ as many men as the gold did.

Friday January 11: Returned to Lae in the morning. John had to meet G.A.R. Stanley, retired geologist of A. P. C., who will represent PNG Scientific Society at the ANZAS conference to be held soon in New Zealand.

I have a booking to Cairns by Qantas plane leaving at 7 AM tomorrow. Report at noon of a cyclone over the Coral Sea, which has delayed some of today's air traffic.

The Womersleys gave a cocktail party for Paine, Stanley, and myself. Present were Niall (DC), Haviland (DO), etc. Stanley, Paine and I stayed for dinner and afterwards saw kodachromes which John made this year on Mt. Wilhelm and a selection from various sources which Stanley will take to Christ Church next week.

John spent 6 days at a lake at C. 11,500 ft. on Mt. Wilhelm. Gilliard established the camp and built sod huts there. Landed on Kegelsugl airport at over 8,000 ft. About 4 hours walk to the lake camp. Air pilot Brown, who accompanied John but did not quite reach the summit, is sure that a Beaver plane could land on the lake with 1500-1600 lb. of loading. Could lift about same weight in take off (about full load). A fair sized lake 500 feet above the camp lake. A pond of over 13,000 ft. and enough woody growth for firewood there.

Stanley an unconventional type, rotund of figure, and with a short clipped gray beard. Raised money for his M.Z. conference trip largely by collecting and selling empty bottles. Brought with him from Port Moresby a native boy about 6 years old. Is staying with a Malay named Conroy, who, with his wife, was invited in by the Womersleys after cocktails.



1. The first part of the report is a general survey of the situation in the country. It is a very interesting and informative survey, and it is well worth reading. It gives a very good idea of the general situation in the country, and it is well worth reading. It gives a very good idea of the general situation in the country, and it is well worth reading.

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Saturday January 12: Left Lae by Qantas at 7:40, flew the Wau route and arrived Port Moresby 8:45. Dorothy Shaw and Father Cruttwell at the airport to meet me. Cruttwell a big, youngish man very interested in botany. Showed me a selection of his water colors of mostly orchids. Vivid colors of a lifelike quality. Has collected about 900 numbers for Kew. Now has to collect duplicates for Lae, and doesn't like it very much.

Left Moresby 8:45 and arrived Cairns 12:30. Good weather but for low cloud on the Queensland coast and rain in Cairns. The cyclone, which passed out to sea somewhere down the coast, is influencing the weather at Cairns.

Am staying at the Hotel Central recommended by Ailsa Hall. Not as good as Hides Hotel used to be.

To Maringa Sugar Experiment Station in evening as guest of Gilbert and Rose Bates. Birthday dinner for Gil and Dr. Don Sword of Cairns, who was there with his wife, son Bob and a student friend of Bob. Bob is a medical student.

Bates informs me that the giant toad, *Bufo marinus*, which has infested coastal north Queensland for years, is now definitely on the decrease in size and numbers.

Sunday January 13: Another very wet day. Floods are widespread in NE Queensland.

George Brooks, who was out insect collecting yesterday, picked me up at the hotel about 10 A.M. and took me to his hospitable home at Edge Hill. (Jessie and their two small sons were there). Spent the morning looking at George's fine collection of beetles. Mostly local species, but a fair number got by exchange from other parts of Australia and countries abroad. The exotics are in separate cases. Critical materials have been worked out by specialists. The emphasis in George's collecting has been on groups in which specialists could give him identification. Has collected several new species, which have been named by other workers. Returned to the hotel by 4 P.M.

Monday January 14: Some showers but weather much improved.

Went first to TAA to arrange an air booking for Brisbane on Wednesday. TAA handle Qantas affairs in Cairns. But it does not belong to the international air organization and my return ticket by Qantas to Brisbane was only good as a credit against the TAA fare of 20 pounds. Had to pay an additional 12/12/. A very curious state of affairs for a big company, owned by the Australian Government, as is Qantas.

Called on Ernie Stephens, Horticulturist, Dept. of Agriculture and Stock. Cordial, but did not seem overjoyed at seeing me. Later got in touch with Tom (T. F.) Webb, manager, Lawrence and Hansen Electrical Co., with George Mills and Frank Moody, we had some beers before lunch. Went out to Mill's place in afternoon. To the Webbs' (Tom and Amy) for a very good dinner. Home-grown Arabian coffee used. Home-grown pepper on the table.



The following information was obtained from the records of the Department of the Interior, Bureau of Land Management, regarding the land owned by the United States in the State of California.

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I understand that there has been wrangling and political wire pulling in the formerly good N.G. Naturalists Club. And that the club is no longer very active. Alf Read is now president. Somehow, the club's museum has passed into the hands of Bob Hunter, who calls himself "Tropical Tours," and is part of a display which tourists pay to see.

Hugh Fisher, formerly of Wenlock, called to see me, now has a carrying business in Cairns and is much interested in growing orchids. His brother Joe, now a qualified mining engineer, manages a uranium mine in West Australia. Has lately got out the world's biggest specimen of pitchblend, weighing over 2,000 lbs.

Tuesday January 15: Fairly fine day and rather hot. Temperatures here are not nearly as oppressive as in Samarai, Port Moresby and Lae.

Was interviewed at the hotel by two young men from the Cairns radio station and made a recording on our work in New Guinea, its extension over the years and its meaning.

Another example of nice equipment going wrong in the tropics is my National Geographic Photographic case. Had to have it opened by a locksmith this morning. Could not unlock it when going through customs on Saturday.

Had Alf Read to lunch. He has been president of the Nats Club for the past 8 years. No one else will have the job and doubt if Alf contributes much brilliance to the club. Club still publishes its small journal and has over 100 members, mainly non-resident, who pay only 10/- a year.

Called on Dr. H. Flecker, radiologist, founder of the Naturalists Club and now 72 years old. Has slipped a lot in the past 9 years. Says the club and its museum are ruined. George Brooks and Ernie Stephens being the leading wreckers.

Later visited the "Tropical Attractions" show of Bob Hunter in Harbour Board buildings on the water front. One long room contains Hunters own amateurist collection of insects, etc. Another houses the "North Queensland Museum" collections, mainly ethnological. Fair number of mammals, a few from the AMNH. Mostly local specimens collected by Gordon Stephens and badly prepared. A girl in charge keeps the rooms and cases clean, but the inside of many of Hunters' poorly labelled cases are in bad mess with dust. Admission charge 2/-. Six other tourists there during my visit.

Wednesday January 16: Left Cairns 8:10 A.M. on TAA convair "William Dampier". Landed Townsville 9:15 left there 9:55. An extra heavy load (the plane seats 40) obliged us to make an unscheduled landing at Rocklambton for fuel (11:55 - 12:25). Arrived New Farm Airport, Brisbane, at 2:05 P.M. A good smooth flight but visibility poor. Streams turbid from Cairns to near Brisbane.

Staying with sister Edna Henderson at the suburb of Hawthorne.







Thursday January 17: Most of the day spent in the city. Have made a reservation for flight to Sydney the night of January 27, and on to San Francisco on January 30. Applied for income tax clearance.

Visited office of Government Botanist and there talked (partly over a sandwich lunch in the back room) with Selwyn Everist (1/C) and Stanley Blake. An appropriation has been made for building this year a brick and reinforced concrete annex to house the library and type specimens. A fireproof wall will separate this from the old wooden building. The herbarium is being gradually reorganized. Families and genera in systematic order. Species alphabetical, except in large genera. Bentham and Hooker system being adhered to. About 25,000 specimens mounted last year. Total number of herbarium sheets nearing 500,000. Library of about 7,000 books. Some rare books, including the only copy of *Flora Braziliensis* in Australia. Now five young graduates in herbarium and library, in addition to Everist, Blake, and Lindsay Smith. An effort being made to fill gaps in periodicals, etc. published during the war.

Friday January 18: Picked up my income tax clearance and had my plane reservations confirmed.

Visited the Queensland Museum and talked with Director George Mack (Mostly) and Don Vernon. Did not see any exhibits. Museum recently began showing Walt Disney pictures. Which can be hired on special terms for free educational purposes. Show put on in pickle-vat atmosphere in a basement room which seats 100 people. No increase in staff (Mack, Wood (young geologist), Vernon and another preparator). Mack as self confident as ever, and no broader. Very critical of George Tate's big work on Malayan - Australian rats, published ca. 1950. Says that a new subspecies described from Cape York does not even belong in the species to which it was attributed. Mack, for comparison, has been borrowing Thomas types from the British Museum.

Learned from Wood that Stan Blake now has a doctorate granted on his published work.

#### Trip to Ipswich, Toowoomba and Dalby

January 18: Left Brisbane by Greyhound bus late in afternoon and arrived Ipswich in about an hour. Stayed overnight with brother Eric in suburb of Raceview.

January 19: Went on to Toowoomba by Greyhound; about 1 $\frac{1}{2}$  hours. Visited the Andrews until evening when I left for Dalby by rail motor, arriving at 8:50 P. M. Queensland rail motors are noisy, but would not be bad to travel short distances if they did not make so many stops. Dalby is 50 miles from Toowoomba, 150 from Brisbane. Stayed with brother Alan.

January 20: Drove with Alan and his family to the very fertile Jimbour Plain, thence via Macalister across the Condamine River to the property of cousin Percy Littleton. Country in fine shape after a season of ample rains. Large scale farming of wheat, grain sorghum (milo), canary seed, sunflower seed, etc. Also dairying and sheep raising, principally for the fat lamb trade. Great prosperity. The man on the land has done well since World War II.



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January 21: Returned to Toowoomba by rail motor to stay with the Andrews. Town prosperous and growing fast. Population now ca. 45,000. Second largest town in Queensland.

January 22: Returned to Brisbane by Greyhound.

Wednesday January 23: Traveled to Palmwoods by train to visit Sister Doris. Tedious journey of three hours. My first class carriage in poor state of repair and the men's toilet door would not open. The Queensland Railways are in a run-down condition.

In afternoon drove about 20 miles north along the Bruce Highway through mostly closely settled farming country; pineapples, bananas (chiefly "ladies fingers"), sugarcane, dairying. Went through the towns of Nambour, Yandina, Eumundi and Cooroy. Highway good for the most part, but in poor repair in some parts, and in some sections too narrow.

Thursday January 24: Back to Brisbane by car (73 miles by road). Did some shopping in town and in evening had dinner with the Walkers at Ascot.

Friday January 25: Visited the Queensland Herbarium and talked with Everist and Blake. Blake doing Scleria for Flora Malesiana; should be finished by June. He and Lindsay Smith are then to work on my 1948 Cape York collection. About October, Smith, C.S.E.R.O. chemist Len Webb, and C.S.I.R.O. plant collector Jones (mainly drug research) are to examine an area about the head of the Escape River where in 1948 I observed from the air what appeared to be a large area of rain forest. Everist hopes that the Arnold Arboretum will agree to publishing a complete enumeration of by Cape York plants. Very desirable from a plant geographical point of view as my collection is the only important properly recorded collection ever made in the area.

Visited W. D. Francis and Mrs. C. T. White on Kangaroo Point. Then said goodbye at the Queensland Museum. Mack had just finished a week's lecture course in natural history to an annual class of 30 school teachers.

Tried to buy knitted woolen goods for gifts back home, but stocks are not opened until March.

Saturday January 26: Visited the E. R. Humphreys at Camp Hill.

Sunday January 27: Left Brisbane Eagle Farm Airport at 10 P. M. by Qantas and arrived Sydney 12:25 A.M. Some rough air, though sky clear. Staying at Wentworth Hotel ( 3-0-0 per day).

Monday January 28: Australia Day and a close holiday. Shops all closed. Could not buy a magazine to read.

Not much sleep last night. A couple of unaccustomed glasses of beer before lunch gave me diarrhoea. Walked the streets in the morning. A crispness in the air. Older women wearing long black coats of some light weight material. Very few men or women in shorts. Different from Brisbane.



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Visited the Australian Museum (Govt. of New South Wales) in afternoon. Old fashioned glass cases crammed with faded and dusty animals, etc. Only a few habitat groups and these crude and mostly small. The mammal and bird collection are being reorganized according to a notice. Some halls closed off. Attendance fairly good. A lot of new Australians, smelling of garlic, liquor and wine.

A telephone summons to appear at Qantas office next door. Found that some smart individual made a mistake when I reported in and finalized my booking for San Francisco this morning and put me down for tomorrow's flight instead of Wednesday's. Was called in for confirmation of this booking. The error has been rectified.

Dropped in to the saloon bar of the hotel to see the TV show (introduced in Australia about last November). As close an imitation of raucous, slapstick U. S. showmanship as they can achieve. Have heard reports that TV is not going well in Australia; sales of sets far under expectations. No wonder.

Tuesday January 29: Tried again (at David Jones') to get cashmere sweaters. Stocks not yet open. Then to the Botanic Gardens. Talked with Anderson (director), Mair (2 l/CO, Miss Tindale (ferns), Johnston, etc. Anderson, a man who "has not aged well" according to Stan Blake; has done only administration work for years. Mair in early middle age; slender man with small moustache; rather nervous manner but easy and friendly to talk to; was l/c Botanic Gardens, Darwin, later as an agricultural officer with the Australian forces in New Guinea, growing vegetables at Garoka, etc. He showed me about the gardens after morning tea. Tindale, perhaps in late thirties, seems competent. Johnston's a queer type with narrow head, gingery beard, but bare upper lip. Is perhaps as unorthodox in his taxonomy. Is doing a revision of Casuarina, in part for Flora Masesiana. Has split the group into two genera, largely on the position of the stomata in the twigs, as far as I can make out.

Herbarium of ca. 600,000 sheets is overcrowded; all material in white cardboard boxes. Types and a set of Banks and Solander specimens segregated from the rest of the collection and kept in the directors room.

Out to the Australian Museum after lunch to call on Troughton, who was away. Then tried to see Whitley (fishes), who could not be found. Troughton at the Anzus conference in New Zealand; Joyce Vickery of the Botanic Gardens also at the conference.

Saw the "Isotopes for Industry". Exhibition of the Australian Atomic Energy Commission in Maritime Services Building on Circular Quay. Films and exhibits showed use of isotopes and equipment. Was fascinated by the capabilities of a master-slave manipulator, with which a needle could be picked up and beads threaded. Good attendance of all ages, ranging from "housewives to scientists", according to the receptionist.

Wednesday January 30: Left Mascot Airport for San Francisco by Qantas at 12:20 P. M. (Super Constellation "G"). Only 10 passengers on the



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big ship. Flight at 19,000 feet. Some bumpy air. Arrival Nandi, Fiji at 6:50 (8:50 their time). Distance 1978 miles. Dinner at Makambo Hotel at airport. Hot and muggy. Wet season.

Left Nadi 10:35 P. M. their time. Arrived Honolulu 9:45 A.M. (11:45 their time). Crossed international date line during night. It is January 30 in Honolulu. Customs and Immigration formalities here; very perfunctory. Room and lunch at Edgewater-Reef Hotel provided by Qantas. Visited Gressitt at the Bishop Museum. Was introduced to his uncle, Prof. Sindsay, retired astronomer, who has been accepted as an associate by the Bishop and is trying to raise money for a planetarium. Left Honolulu 8 P. M.

Thursday January 31: A good, uneventful flight ended at San Francisco at 5:15 A.M. (7:15 their time). Place looks wintry (there was inches of snow a day or two ago). Temperatures 30F. when we landed. Staying the day at Hotel Sir Francis Drake. Did this for a rest after two nights on the plane, but had a fairly good sleep last night. I could have gone on today. Am traveling tourist class. Plenty of space on the aircraft, the arm-rests were removed from the 3 seat rows and we could all lie down and get some real sleep. Plane noisy.

Friday February 1: Left San Francisco by TWA at 9:35 A.M. non-stop flight to Idlewild Airport, New York, with arrival at 5:15 P. M. (8:15 their time). Smooth flight at 23,000 ft. most of the time. Were held up for perhaps one-half hour over New York in a snow storm. Learned when we landed that in the storm a North-Eastern Airline DC6B plane had crashed on Rikers Island, after take off, with the loss of over 20 lives.



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